Business Education Innovation Journal VOLUME 8 NUMBER 2 December 2016

Contents

Page

3 Introduction

4 Editorial Review Board

5 Journal Information

5 Subscriptions and Cabell's Listing

6 **Adding FinTech and Blockchain to Your Curriculum**
Steven R. Kursh, D'Amore-McKim School of Business, Northeastern University - Boston, MA, USA
Natalia A. Gold, D'Amore-McKim School of Business, Northeastern University - Boston, MA, USA

13 **Sustainability and Business Model Innovation at the Bottom of the Pyramid: A Graduate Business Project**
Shahram Taj, Florida Polytechnic University, Florida, USA
Beena George, University of St. Thomas, Texas, USA
Priya Nath, University of Houston, Texas, USA
Adeyinka Adenrele, Independent Consultant, Michigan, USA

21 **The Determinants of Student Performance in a University Marketing Class**
James C. Brau, PhD, CFA, Department of Finance, *Brigham Young University (BYU)*
Rebekah Inez Brau, Masters Student, Department of Instructional Psychology, *BYU*
Stephen R. Owen, PhD Student, Department of Finance, *Pennsylvania State University*
Michael J. Swenson, PhD, Department of Marketing and Supply Chain, *BYU*

32 **A Comparison of Factors Affecting Student Performance and Satisfaction in Online, Hybrid and Traditional Courses**
Retha A. Price, Mississippi College - Clinton, Mississippi, USA
Tammy Y. Arthur. Mississippi College - Clinton, Mississippi, USA
Kevin P. Pauli, Mississippi College - Clinton, Mississippi, USA

41 **A Preliminary Study of Changes in Online Graduate Business Student Perceptions Over a Course**
Lynn A. Fish, Canisius College, NY, USA

51 **Developing the Personal Ethics Code: A Key Element of an Effective Business Ethics Course**
Cynthia M. Orms, JD, MEd, Georgia College & State University, Milledgeville, GA, USA

59 **The Use of Formal Discussant Teams to Enhance Classroom Discussion of Assigned Case Studies**
Thomas J. Liesz, University of Nevada – Reno, Nevada, USA
Kathy L. Pettit-O'Malley, University of Idaho, Idaho, USA

64 **The Truth about Lying: What Should We Teach About Lying and Deception in Negotiations: An Experiential Approach**
Edward G. Wertheim, D'Amore-McKim School of Business, Northeastern University, MA, USA

71 **Public Sector Negotiation: A Real World Integrative Case**
Michael R. Carrell, Northern Kentucky University, Highland Heights, Kentucky, USA
Louis J. Manchise, Northern Kentucky University, Highland Heights, Kentucky, USA

79 **A New Career Strategies Course for Undergraduate Business Students**
Stephen E. Bear, Fairleigh Dickinson University, Teaneck, New Jersey, USA

Table of Contents Continued on the Next Page

Page **Table of Contents Continued**

85 **What Do I Do with this Flipping Classroom: Ideas for Effectively Using Class Time in a Flipped Course**
Thomas Tiahrt, University of South Dakota, South Dakota, USA
Jason C. Porter, University of South Dakota, South Dakota, USA

92 **Using Media Clips with the Visual/Virtual Generation: We are Doing it Backwards**
Craig Poulenez Donovan, Kean University – Union, New Jersey, USA

104 **Integrate Video-Based Lectures into Online Intermediate Accounting II Course Learning**
Lei Wen, Emporia State University, Emporia, Kansas, USA

110 **Facilitating Team Projects in the Online Classroom: Enhancing Student Team Effectiveness**
Erin B. McLaughlin, Nova Southeastern University, FL, USA
Joshua J. Daspit, Mississippi State University, USA

114 **Employer Assessment of Information Systems Internships Based upon Student Perception of the Employer's Support**
George Garman, Metropolitan State University of Denver - Denver, Colorado, USA

124 **Experimenting with Course Design and Discipline Integration in an Applied Environment**
Dr. Paul M. Lane, Seidman College of Business, Grand Valley State University, MI, USA
Dr. John P. Farris, Padnos College of Engineering and Computing, Grand Valley State University, MI, USA

133 **Teaching Microsoft Project in the Project Management Classroom: The Dream Home Project Exercise**
Matthew Valle, Elon University, North Carolina USA
Danny Lanier, Jr., Elon University, North Carolina USA

146 **Teaching By Design Using a Question Template To Transform Student Writing**
Swenson, James, Ph.D., Paseka School of Business, Minnesota State University Moorhead, Moorhead, MN 56563

153 **A Comparison of Introduction to Business Courses at Top-Ranked Schools**
James P. Borden, Villanova University, Villanova, PA USA

161 **Turnaround Strategy: Overview of the Business and Marketing Challenges Facing the Golf Industry and Initiatives to Reinvigorate the Game**
Brenda Hayden Sheets, Murray State University, Murray, KY, USA
Joy Roach-Humphreys, Murray State University, Murray, KY, USA
Timothy Johnston, Murray State University, Murray, KY, USA

172 **Analysis of the best practices followed by the top business schools in the United States when teaching Business in Spanish**
Virginia Cortijo, Stonehill College, Easton, MA, USA

180 **Cost Accounting: Linking Necessary Concepts**
Letitia Meier Pleis, Metropolitan State University of Denver – Colorado, USA

188 **Critical Thinking Development Through Teaching: A Sample Project in Accounting**
Anne M. A. Sergeant, Grand Valley State University, Grand Rapids, Michigan, USA
David M. Cannon, Grand Valley State University, Grand Rapids, Michigan, USA

198 **Preparing your sales course for Generation Z**
Donald Thacker, Kent State University at Stark, North Canton, Ohio, USA

205 **Teaching an Inverted "Ricardian" Argument to Help Students Solve Comparative Advantage Problems**
José Castillo, University of Arkansas at Pine Bluff
Steve Smith, Truman State University, MO

210 **Manuscript Guidelines, Submission, Review Process, Style Guide and Example**

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

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

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

Peter J. Billington
Editor

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Adding FinTech and Blockchain to Your Curriculum

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ABSTRACT

Institutions are at a watershed regarding the means that they use to provide financial and insurance services to enterprises and consumers. FinTech, technology solutions and startups that have disrupted and/or improved the way finance, banking and insurance industries do business, has become one of the largest growth industries in the worlds of finance and technology. Blockchain has gained great attention, investment, and development within FinTech because it addresses two of the riskiest aspects of life and business on the Internet: transactions and trust. There are exciting career and advancement opportunities for business and technology students, faculty, and universities to equip the next generation of FinTech architects and innovators. Recently, some universities have begun to develop programs, courses, and groups to support FinTech innovation and education. In this paper, we review FinTech and Blockchain. We conclude by reviewing some of the approaches used by universities to teach FinTech and Blockchain.

Keywords: FinTech, Blockchain, Bitcoin, transactional ownership and security, mining, data synchronization

INTRODUCTION

Today, we have come to a watershed in the means that institutions use to provide financial and insurance services to enterprises and consumers. While many of us are already familiar with Apple Pay or Samsung Pay, mobile payments solutions, we may have limited knowledge and experience with FinTech. FinTech, however, is much greater in its reach and impact on nearly all businesses, including even consumers and enterprises in emerging economies.

In this paper, we provide some general background on FinTech and one particular aspect of FinTech, Blockchain, significant topics to include in your curricula in finance, entrepreneurship, strategy, and other business subjects. After a general review of FinTech, we follow with more detailed discussion of Blockchain. We conclude with a summary of how universities differ in their approaches to teaching FinTech and Blockchain. Drawing from this summary, you may find a means to include FinTech and Blockchain within your own courses in a manner that is appropriate both for your curricula and for your university.

WHAT IS FINTECH?

FinTech, defined as technology solutions and startups that have disrupted and/or improved the way finance, banking and insurance industries do business, has become one of the largest growth industries in the worlds of finance and technology. The sector is becoming the next great technology revolution, like no other seen in the last ten years. The promise of today's FinTech includes greater security, faster transactions, and revolutionary options for commerce, financial services, and insurance.

The industry is likely to upend traditional banking, finance, and insurance with solutions that serve consumer and business needs in an ever changing, technology-driven culture. A new generation of technology entrepreneurs and finance sector veterans have dreamt up and built innovative financial solutions like Blockchain, crowdfunding, mobile payments, and peer-to-peer lending, taking a centuries old industry and standing it on its head.

FinTech: Description and History

Technology, strategy, and finance have been tightly interwoven for decades. One such union and a significant factor in consumer banking strategies for many financial institutions, the ATM (automated teller machine), first appeared in 1967. More recently, responding to the growth of the Internet and the shift toward mobile platforms, nearly all financial institutions and insurance companies have shifted their strategies and their commitments.

After the crash of the financial sector in 2008, a great confluence of events catapulted FinTech to new prominence as a new industry. During the recovery that followed, the financial sector was charged with implementing the Dodd-Frank Act, a massive set of new regulations meant to prevent any future crash, and 8.7 million people, many from the worlds of finance and banking, were newly unemployed. Along with disruption and regulation, however, this era saw the ubiquity and the utility of smartphones among consumers.

FinTech start-ups began to crop up to address pent up demand for mobile and online commerce apps, greater security, and small and micro business financing and services. This period saw the emergence of companies like Square for micro-mobile payments (founded 2009); Kickstarter, for crowdfunding (founded 2009); and SoFi, for online personal loans (founded 2011). Both Bitcoin and Blockchain also were born (founded 2008). Because of legacy technology and massive regulatory burdens, incumbent institutions could not move fast enough to keep up with these young upstarts, and a whole generation of newly invented financial, banking, and insurance solutions were created all over the world. The large institutions did not sit back and watch all of this happen, however. Instead, they bought start-ups, funded new innovations, and developed their own technologies. The battle between existing players and newcomers is ongoing.

For incumbent institutions, small businesses, and consumers alike, the capabilities of many of the latest FinTech innovations have justified the excitement and massive investment. New technology, like Blockchain or distributed ledger, promises virtually un-hackable transactions to create secure commerce and record-keeping like never before seen.

FinTech makes the 'gig economy' (a flexible, distributed, often self-employed model of working, think Uber) more possible than ever, providing easier, more available services to this sector of the workforce such as mobile payments and billing, micro-funding, and personalized insurance. Consumers have celebrated the convenience and ease by which payments can be made and received with technologies like Apple Pay and Google Wallet.

Perhaps one of the greatest impacts of FinTech will be on the 1.2 billion unbanked people around the globe. Revolutionary technologies will enable them to become part of the global economy, buying, selling, sending and receiving money, all with no physical bank involvement by simply using a mobile phone and cellular network.

FinTech generally comprises two categories, cooperative or disruptive. Cooperative FinTech works with the existing finance infrastructure and either streamlines it or makes it more user-friendly (e.g. online banking). Disruptive technologies have reimagined finance altogether and invented new ways of doing business (e.g. crowdfunding). The industry is also often segmented by the business process it provides (e.g. deposit accounts, payments, lending, wealth management or investing, insurance, markets, and back office operations) and the customer segment it serves (e.g. retail banking, insurance, and corporate banking).

Driving this revolution are the educated, experienced, and imaginative young entrepreneurs and finance industry greats, many displaced after the Great Financial Crisis of 2008. (bitcoinist.net) In this arena lies an incredible opportunity for business and technology students, faculty, and universities to equip the next generation of FinTech architects and innovators. Over the last two years, universities have recognized this fact and begun developing programs, courses, and groups to support FinTech innovation and education. This sector, if developed properly by universities, has the potential to offer exciting career and advancement opportunities for an entire generation of business and technology students. Both universities with business schools and students who fail to recognize the vast opportunity may be left behind.

A Well-Capitalized Industry

The private sector has certainly acknowledged the promise and the growing importance of FinTech by heavily investing in it through venture capital, private equity, direct corporate investments, and public offerings. In fact, investments have risen exponentially from $4.05 billion in 2013, to $12.21 billion in 2014, and $22.3 billion in 2015.

In addition to this plethora of financial resources, investment dollars, and venture capital, however, being funneled companies are channeling their foci and pouring vast amounts of other resources into the sector. For example, incumbent institutions such as JP Morgan Chase have an internal incubation lab to develop Blockchain technologies.

Also, a consortium comprising more than sixty financial institutions has formed and is targeting financial and human resources towards developing the next generation of Blockchain technology for the finance and banking sectors. The 225-year old State Street Bank recently launched a Blockchain R&D facility in Ireland, inviting university students to conduct research into new banking technologies. (Tapscott, 2016) Additionally, there are countless entrepreneurs and innumerable start-ups that are developing financial technology and solutions to disrupt the way business is done.

LOOKING AT BLOCKCHAIN

Blockchain has gained great attention, investment, and development within FinTech because it addresses two of the riskiest aspects of life and business on the Internet: transactions and trust. We've long recognized the security, privacy, and trust issues that plague the Internet, and since the early 1980s, technologists have been working on a solution to these problems. Until recently, the use of intermediaries was the best method to completing transactions securely and with trust. As we know, however, security is often a weak point, and data breaches leave individuals' personal and financial information vulnerable, thereby often putting trust at risk.

A solution came in 2008 when Satoshi Nakamoto (a pseudonym for an unknown person or group) published a paper outlining a protocol (a set of rules or procedures for transmitting data between electronic devices, such as computers) that created a peer-to-peer, electronic cash system using digital currency, now known as Bitcoin. Although some are skeptical of Bitcoin's success as a legitimate currency, the technology that underlies the digital currency has thrilled technologists, business leaders, and technology companies alike. This shift in interest, attention, and investment from Bitcoin the currency to the Blockchain technology that underlies it is recent, transpiring in 2014. In particular, financial institutions began to recognize its disruptive capabilities, and venture capital began to pour into the new sector of technology. (Swan, 2015)

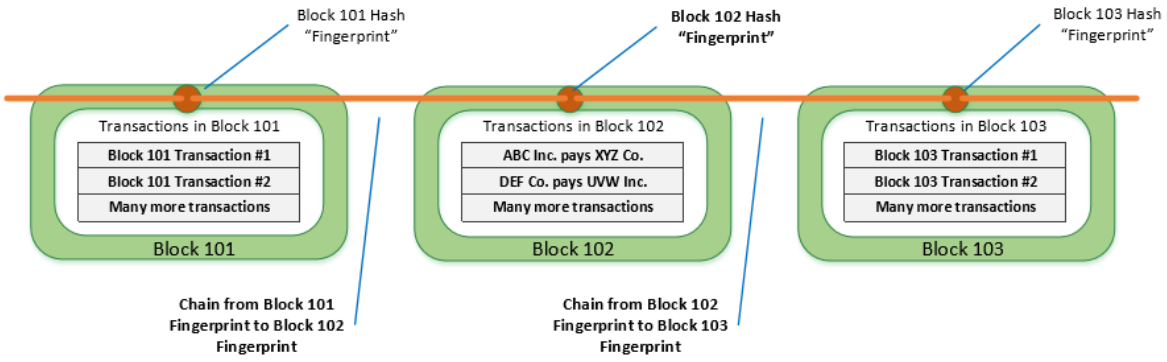
How It Works

Blockchain technology runs as a protocol or application atop the current stack of Internet protocols using the Internet as its mode of connection to its distributed network of nodes. This protocol, however, is built and designed specifically for the transfer of value and property, to make possible secure, transparent, immutable economic transactions; the original design for the Internet neither appreciated the need for nor offered this capability.

The Blockchain is built upon a distributed network, as opposed to a centralized or decentralized network. A distributed network is made up of numerous, equal peers or nodes, with connections forged among other peers on the network; each node runs a copy of the universal ledger, and they all synchronize regularly. So, as one might imagine, the network is very resilient from attack, and failure is unlikely. Even if one node is compromised, all the other peers or nodes maintain the integrity of the ledger.

The exhibit below shows an overview of how the blocks are built and chained together, including the data storage structure and the financial transactions themselves.

Figure 1: How Blockchains, Blocks, and Transactions Work



A Blockchain is composed of blocks chained together via a 64-hexadecimal character hash "fingerprint" assigned to each block, with blocks containing many individual transactions. Blockchain also uses public and private

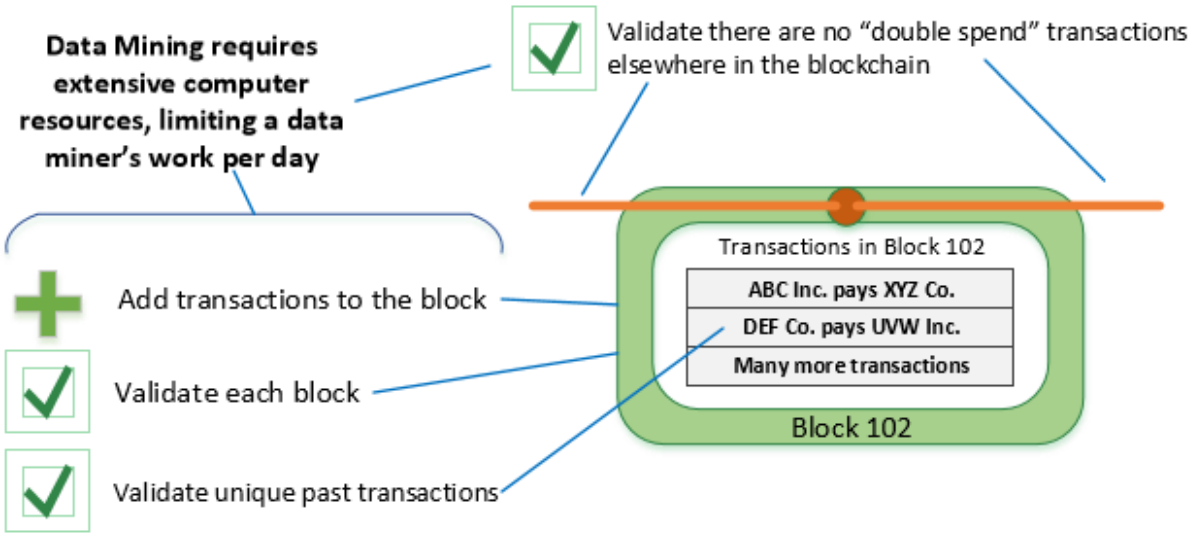
cryptographic keys to provide confidentiality and to establish authority. All data is encrypted with both a public key and a private key. Thus, in order to unlock data or a transaction, both keys must be present. One encrypts, the other decrypts and vice versa.

Put simply, the brilliance of Blockchain technology is in its structure as a single record of all transactions; thus, duplications or discrepancies among records do not exist. Before any transaction may be recorded in the Blockchain, the network must reach consensus; and each recorded transaction, moreover, is viewable to all yet immutable. Further, the Blockchain is distributed among countless nodes and encrypted in a well-nigh unbreakable code and structure.

Without being tracked by a third-party verification authority, digital cash, similar to other data on the Internet, was easily duplicated (a double-spending problem). Thus, one unit could be copied or counterfeited and then spent multiple times with no way to distinguish among the original or real unit of currency and a potential bevy of counterfeits. Blockchain combines the distributed network and the cryptography of the public keys to prevent the double-spending problem. A transaction's ownership is recorded in the Blockchain ledger, and all ensuing activities become part of its history, viewable to the entire network.

Transactional ownership and verification is accomplished via Blockchain mining. *Mining* is a Blockchain term for cryptographic data processing to enforce the system's integrity. Mining continually checks transactions that occurred previously, making sure the block's chronological sequence is correct and preventing the modification of blocks that contain valid past transactions. If an older block is modified, all subsequent transactions involving that block are invalid. Mining also prevents new invalid blocks from being added to the Blockchain, requiring considerable computing resources from each Blockchain node in the network. In effect, Blockchain mining comprises a digital vault through enormous numbers of computer-driven transactional checks; thus, thorough trust in the digital miner organization, the digital systems, and their personnel is crucial.

Figure 2: Mining Blockchains, Blocks, and Transactions
(McKinsey & Company, 2016)



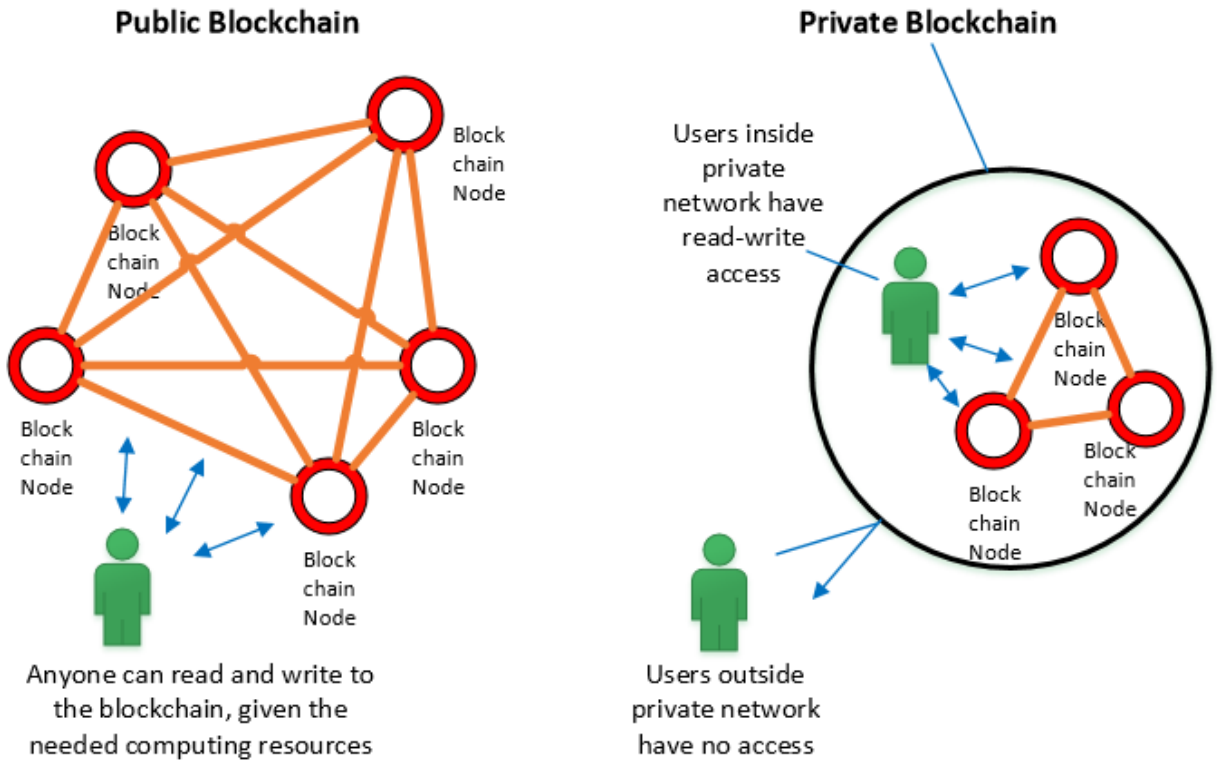
Blockchain application programming interfaces (APIs) are commonly utilized for mining through a variety of computer languages such as C++, Java, .NET (C#), Python, Ruby, PHP, Node, Javascript, Assembly, and others. The flexibility of APIs allows users to consider incorporating Blockchain financial technology as a component within a company's own applications.

Although the Blockchain was originally envisioned and designed to record the transactions of the cryptocurrency Bitcoin, in its future iterations, Blockchains will be used outside of financial transactions as a registry of any asset of value and as a system to record, to track, to transact, and to monitor. This usage will extend beyond economic value and property to even more intangible assets like a vote, one's reputation, or health data. (Norton, 2016)

There are two basic types of Blockchains: public and private. Public Blockchains allow anyone to write and to read data without permission from an authority, with the most notable example being Bitcoin. Anyone with a computer or smart device can download the Bitcoin software and create a personal digital wallet.

Private Blockchains have known participants who have controlled read and write access, working like a private network. A private Blockchain could be a group of related companies, an industry group, or a department within a company.

Figure 3: Public and Private Blockchains



Blockchains offer intriguing advantages. When using Blockchain in a financial transaction, there are no third parties, since the value flows from the initiator to the receiving party. The familiar financial middleman is replaced by a Blockchain technological system, with the potential to cut down on fraud and identity theft. In effect, Blockchains work like an electronic form of cash, with middlemen disintermediated. This has significant implications for financial services and insurance companies.

Blockchains replace paper in financial transactions, making money movement real-time fast. Blockchain mining does continuous financial audits multiple times per day, thus, avoiding the need for periodic financial audits. Since Blockchain data is viewable by others, it offers financial transparency. Blockchains also have an advantage of removing regulatory overhead and its costs, requiring buy-in from all financial stakeholders, including government.

Of course Blockchains' cash-like nature has spawned illicit use, so anyone contemplating using Blockchains should exercise caution when doing so. In 2014, Mt. Gox, the largest Bitcoin exchange at the time, was hacked, causing more than $300M of loss to its users. Bitcoin, too, has been used for nefarious purposes; it was the currency of choice for online black market purchases of illegal drugs on the darknet platform the Silk Road until 2013, when the FBI arrested its owner and shut it down.

The lack of Blockchain regulation could alternatively work to its disadvantage. For example, Blockchains are diametrically opposed to current banking business practices. As a currency disconnected from regulation, the digital

currency worth could be volatile as has been seen with Bitcoin.

Another disadvantage of Blockchain is that miners within its organization nodes must acquire substantial computer hardware and software to do continuous financial transaction checks, requiring both specialized organization and people skill sets.

Security Needs
As noted above, cryptography and digital signatures provide identity and valid user access to data, so ensuring security must be uppermost in the minds of Blockchain implementations.

Blockchains depend on distributed servers housing a replica of all Blockchain data; thus, data synchronization is essential to ensure the full data set appears in all servers. In our experience, replication synchronization can be problematic, so there should be safeguards in place to ensure all servers are current. Before moving to private Blockchains with trusted users, companies must ascertain that the Blockchain data architecture is a good fit.

How Blockchain is Being Used Today
Because of its capabilities in security, in privacy, and in data management, Blockchain has captured the interest and the resources of the financial industry as well as the attention of numerous other major industries from music to healthcare to even governments around the globe. Currently Blockchain is being tested by financial institutions to increase security, to provide transparency, and to speed transactions; manufacturers also use it as a digital means to track supply chains and to enforce contracts. Finally, governments employ it to verify and to secure property records and records of citizenship. Some even use it for tax filing and voting. On the Blockchain, the individual will control access to her personal data, much like she decides how her money is used. With both personal funds and personal data, she is able to disburse them when, where, and with whom she pleases.

The Bitcoin Blockchain is the largest, most well-known, and public Blockchain currently in use. There are numerous companies and industries exploring applications and uses of this Blockchain. However, there is also a great deal of interest, development, and testing going on with private Blockchain networks that have a limited and permissioned set of participants. [(Wong)] The financial industry, set to be Blockchain first-movers, has already invested heavily in exploring and developing technologies on Blockchain. *The Wall St. Journal* reported that as of early 2016, large banking institutions and financial markets have invested over $1 billion in the industry. Ninety-one percent of all investment in Blockchain/Bitcoin startups has occurred since 2014, with 60 percent transpiring since 2015. Start-ups and legacy corporations alike (*e.g.* IBM) are building pilots to test settlement of trades, clearing transactions, and verification of trades and transactions dealing with stocks, loans, derivatives and various assets.

WHAT UNIVERSITIES ARE DOING

Universities seem to be approaching FinTech and Blockchain in different ways, including adding courses, degree programs, lecture series, and boot camps; forming student clubs; and, even, incubating entrepreneurial ventures. Many leading universities have started adding FinTech to their coursework in one way or another. Some programs focus more on the technology side, for example, by teaching about the technical aspects of Bitcoin, Blockchain, and cryptocurrencies. Some programs are focusing on data analytics, a critical benefit of robust FinTech.

Other programs explore the sector at a higher level, offering a study of all the different ways FinTech is disrupting the financial, banking, and insurance sectors and encouraging entrepreneurial business development. Simon Fraser University in British Columbia, for example, has even gone so far as to start accepting Bitcoins as payment in its bookstores and even installed BTMs (Bitcoin Teller Machines) around campus to provide students with a literal hands-on cryptocurrency-learning environment. The university has also formed its own Bitcoin Club to help students dive further into the world of FinTech and digital currency. Indeed, the industry is broad enough that one could argue for the establishment of multiple degrees or, even, for a department to be built around the sector. For now, though, most universities are just beginning to explore and develop the study of FinTech.

We have found that universities are approaching the teaching of FinTech and Blockchain in different ways. Here are some of our major findings:

- **Overview vs. specialized** – The split between courses that provide a broad overview of the entire FinTech universe *versus* courses that examine one specialized aspect of FinTech *(i.e.*, Bitcoin or cryptocurrency) is 50-50.

- **Courses and clubs** – One-third of universities that offer FinTech courses also have student-led FinTech groups. These groups enable students to supplement their studies by hosting events, attending conferences, writing papers, performing internships, and engaging in career networking.
- **Master's degree programs** – Only two of the universities in our study offer FinTech graduate degree programs.
- **Course materials** – Of the programs examined, most use business cases, research articles, and white papers as teaching material to supplement course lectures and projects. There is one course that uses a textbook *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction* by Narayanan, Bonneau, Felten, Miller and Goldfeder.
- **Instructors** – The majority of courses and programs have lecture-based courses taught by an instructor and supplemented with numerous guest lecturers. The guest lecturers are generally FinTech executives and entrepreneurs as well as FinTech investors from venture capital and private equity firms.
- **Emphasis** – As shown in the chart below, the top three emphases among courses in the programs examined included entrepreneurship, finance, and cryptocurrency.

At Northeastern University, we have begun the effort to incorporate FinTech and Blockchain into our business school curriculum. More specifically, we introduced material related to FinTech and Blockchain in some courses in finance, strategy, entrepreneurship, and information technology. Drawing on the experience of several alumni who are working in the field, we hosted a symposium for students. Like many universities, we are forming a FinTech club for our students. We also plan to have some of our undergraduate and graduate students work at FinTech companies for their coop employment. We welcome your inquiries regarding our efforts and would be delighted to share ideas on what is working for us.

CONCLUSIONS

FinTech has become one of the fastest growth industries in the worlds of finance and technology. Blockchain, within FinTech, may have significant far beyond financial services and insurance. FinTech will be evolutionary, not revolutionary. FinTech curriculum if developed properly by universities has the potential to offer exciting career and advancement opportunities for an entire generation of business and technology students.

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Sustainability and Business Model Innovation at the Bottom of the Pyramid: A Graduate Business Project

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ABSTRACT

This study proposes a workable approach in the business curriculum to prepare business students to have a global perspective and act creatively and innovatively to develop sustainable solutions for the business community. A course project was developed to educate MBA students about multifunctional, multidisciplinary perspectives of sustainability, innovation, and emerging markets. Teams of students incorporated entrepreneurial and innovate skills to identify and provide services and products for consumers and business partners at the bottom of the pyramid (BOP).

Keywords: business education, business modeling innovation, sustainable operations, bottom of pyramid

INTRODUCTION

The business community needs strong professionals capable of leading business organizations ethically and responsibly into the future. Yet, there appears to be a disparity between the needs of business and the products of today's business programs. A scan of the curricula of the business programs shows that the emphasis of these programs is on sustaining the operational effectiveness of businesses. While this is absolutely necessary, the graduates of business programs ought to be also able to create new products and services that meet the needs of the underserved segments of the market. This training would stand the graduates in good stead whether they decide to choose an entrepreneurial path or realize their professional goals within larger organizations. Some business schools have started offering programs that provide this skill set such as Stanford University (Datar et al., 2010), but more remains to be done.

Business leaders have expressed their concerns regarding the MBAs curriculum. One of their concerns is that MBA graduates need to be taught a multifunctional, multidisciplinary perspective that helps them address current issues of sustainability, innovation, and the global market. Canen and Canen (2002) encourage innovation in management education sensitive to cultural diversity. They argue that the development of cross-cultural approach is very important for success of innovation management globally.

Maritz et al. (2014) has identified innovation education as the major contributor to enhancing the innovation by individuals and organizations. They discuss the inadequate literature on the development and assessment of innovation education programs in the higher education. Maritz el al, propose a conceptual framework of a multi-dimensional innovation education program based on a successful collaborative international innovation management program. This educational program is a joint Master of Science in Global Innovation Management that has been designed and delivered by a consortium of four universities: University of Strathclyde (Scotland), Aalborg University (Denmark), Hamburg University of Technology (Germany) and Swinburne University of Technology (Australia). This graduate program launched in 2008, admits students with degrees in engineering, science and technology. Students learn skills to develop and manage the innovation process globally with industrial engagement and a rich cultural experience by studying at two different universities. The Maritz et al (2014) framework consists of seven components: context, outcomes, objectives, audience, content, pedagogy and assessment.

The silo approach taken in the business programs limits the graduates' ability to solve business concerns that span functional disciplines or boundaries. With businesses decreasing their financial support for employees attending part time and executive business programs (Datar et al., 2010), it is imperative to prepare the business professionals before they move into decision-making roles in the workplace.

Further, majority of business opportunities are occurring in the emerging and developing economies, a market space that gets limited attention within the business curriculum. According to The Conference Board Org (2016) the projected GDP growth from 2016 to 2020 in the developing and emerging nations is 4.6%, while the GDP growth of

matured nations is about 2.1%. In the developing and emerging economies, business professionals need to go beyond applying their skills and talents in the traditional ways and means to adapt existing products and services and create innovative products and services to meet the needs of the local markets. Datar et al. (2010) in their book, "*Rethinking the MBA: Business education at a crossroads*", report that business schools need to review and reassess the theoretical aspect of the course material and place more emphasis on the practical component. In addition, they identified eight unmet requirements which are

- gaining a global perspective
- developing leadership skills,
- honing integration skills,
- recognizing organizational realities
- implementing effectively,
- acting creatively and innovatively
- thinking critically and communicating clearly
- understanding the role, responsibilities and purpose of the business
- understanding the limits of models and markets

Employers' opinions match the findings of Datar et al. (2010) as they rank imagination and creativity highly among the top ten skills for an MBA graduate. (Ghannadian, 2013). Acknowledging the demands placed by global business realities and the need to prepare graduates to meet such challenges, a semester-long project that combined the principles of common good, innovation to produce customer value, and sustainability in business operations was created and assigned to students in a graduate business program. The bottom of the pyramid (BOP) business model offers one means of poverty alleviation, and thus was selected as a valuable perspective to create awareness of conducting business to address the common good.

In this paper we discuss a team project, with requirements of business model innovation, sustainability, and the bottom of the pyramid business model, was incorporated into the curriculum of a required core course in a traditional MBA program within a liberal arts university in the south central part of United States. The project aimed to educate students about multifunctional, multidisciplinary perspectives of current issues of sustainability, innovation, and emerging markets. Students had to develop entrepreneurial and innovative skills to find workable and sustainable solutions to solve the problems of the economically disadvantaged and underserved segments of the population. The evaluation of the projects by the industry judges and the feedback from the students suggest that this is an effective way to address the training needs identified by business practitioners and concerned academics.

In the following sections of this paper, we describe the key concepts that formed the core of the project: business model innovation, sustainable operations, and the bottom of the pyramid business model. We then provide the design and the rationale for the design that includes a detailed description of the project requirements and deliverables. This is followed by an overview of two team projects to illustrate how students handled the requirements of the projects including feedback from the students. Finally, we discuss the merits of this approach with suggestions for improvement, as business schools strive to meet the needs of businesses.

BACKGROUND (CONCEPTS REVIEW)

In designing the project, the goal was to engage and challenge students on the concepts of common good, innovation, and sustainability. To sensitize students to the notion of the common good and to set a common framework for all students, we decided to use the BOP as the target market due to the challenge of innovating product/service offerings for this segment. We also wanted students to use the business model innovation design framework for creation of products; we chose this approach to encourage a departure from the usual approaches to solving business problems. To add an additional level of complexity and ensure that students remain aware of the responsibility of protecting our planet, we required sustainable operations for producing the product/services designed by the student groups. In this section, we will describe briefly topics of business model innovation, sustainable operations and the bottom of the pyramid. Additional details on each topic are included in Appendix 1.

Business model innovation

Business model is the design for the successful operation of a business. Johnson et al. (2008) in their article "Reinventing Your Business Model" define a successful business model as having four interlocking elements:

customer value proposition; profit formula; key resources; and key processes that create and deliver value. The customer value proposition solves an unfulfilled need for a target customer. It is important not just to define what is sold, but also by how it is sold. The profit formula is very critical and it's based on what target customer are willing and able to pay as the price to fulfil their unmet needs. The revenue model is how much money can be made by multiplying price by volume. We also need to determine a profit margin to achieve a desired profit goal. The key resources are those resources such as people, technology, information, and alliances with other organization such as NGOs, to deliver profitably the customer value proposition. The key processes make the design, development, sourcing, manufacturing, marketing, financing, and distribution of the product (service) successfully. Johnson et al. discuss why companies have hard times to implement business model innovation. The difficulties are due to companies' lack of understanding their existing business model and also lack of understanding or training into the dynamics and processes of business model development. To resolve the problem, companies should uniquely integrate their key resources and processes into delivering perefct goods (services) for the target customers by focusing on the customer value proposition and the profit formula.

Business model innovation has the potential to fundamentally shift an industry. The business professional must tap into a new market (Novelty of market -demand) with a new solution (Novelty of solution in the supply process). Good examples are Zip car, Netflix, Zara (Fast Fashion), Apple IPod, and IKEA.

Cachon & Terwiesch, (2013) propose two means to generate business model innovation:
I. The Demand Side of Business Innovation - Change the way a product (service) meets customers' needs to increase the utility of their consumption. This could be accomplished by changing one or more attributes (price, preference fit, transactional efficiency, quality) of the product or service.

II. Solutions*: The Supply side of BMI* – Changes to process timing, process location, and process standardization.

Sustainable operations
Operations refers to the activities related to sourcing, production and distribution of products and services. Operations activities are important part of sustainability as they helps us to ensure that we are able to meet the needs of our customers over a sustained period of time. We should use renewable resources in our operations activities. Drake & Spinler (2013) on their paper on "Sustainable Operations Management: An enduring stream or a passing fancy?" discuss sustainable consumption of renewable and nonrenewable sources as "(i) Consumption of a renewable source is sustainable if it is no greater than the regeneration rate of that source; (ii) consumption of a nonrenewable source is sustainable if the economy substitutes an alternate material or technology at a sufficient rate that the nonrenewable resource is fully replaced before its reserves are exhausted; and (iii) the emission of pollution (or waste) is sustainable if it occurs at a rate no greater than the rate at which its sink (the ecosystem into which it is injected) can naturally assimilate it plus the rate at which the pollutant is actively removed" (Drake & Spinler p. 4) Drake & Spinler also discuss how Sustainable Operations Management could help with finite supply of natural resources and how efficiently these materials are used by reducing waste into ecosystems. Operations sustainability also refers to product design, choice of materials, design for recyclability, and design for supply chain. Using our resources more efficiently means we get much higher return from them that allows us to lower prices while maintaining profit margins, resulting into a sustainable source of revenue.

Kleindorfer et al. (2005) also discuss sustainable operations management, and argue that the growing pressure on businesses on sustainability, has resulted into a movement towards triple bottom line (profit, people, and planet) reporting. Now businesses are facing new challenges such as integrating environmental, health, and safety issues with green-product design, lean and green operations, and closed-loop supply chains.

There is growing demand for leaders who understand that planned growth, ethics, community, and the environment all impact business strategy, value creation, and shareholder return. Leaders in sustainability understand the goal of creating quality of life now and for future generations requires an integrative approach to achieving economic viability, social equity, and environmental impact. We could use tools of operations management (quality, lean, faster flow time, delayed differentiation, logistics/transportation, and packaging –lowering carbon footprint) to create and manage sustainable and highly profitable businesses (Cachon &Terwiesch, 2013).

The bottom of the pyramid
BOP refers to 65% of the world population who live below the poverty line, mostly rural areas of the world, with a purchasing power of less than $2,000 per year. Prahalad and Hammond (2002) stated that the bottom 65% of the world's economic population can be a viable market for multinational corporations who adapt the products and

services to the BOP's needs and create new business models and innovative technological measures that work with the BOP environment. While most of the BOP resides in rural areas, companies can develop access to the rural markets through creative and new strategies. There has been a lengthy discussion on theories surrounding the BOP. Organizations and scholars have examined the possibilities of tapping into the large BOP market, including the concerns, criticisms, examples of failure, and inspiring success stories. For more information see Prahalad (2012), Karnani (2007), and Jaiswal (2008).

PROJECT DESIGN

The purpose of the team-project was to develop a business model innovation using sustainable operations targeting the bottom of the pyramid. The project involves identifying a product or service and the development of processes to provide that product or service satisfying three conditions.

(1) Applies principle of business model innovation

(2) Mindful of sustainable processes (operations)

(3) Targets the market at the BOP

In response to businesses and the global trends few business schools are creating curriculum with hands on experience classes focused on tapping their graduate innovative and entrepreneur skills in workable solutions to issues affecting people and corporations as well as being challenged to create innovative products, services and companies. For instance, Stanford Creating Infectious Actions (CIA) course is geared to impart innovation and creativity thinking skills (Datar et al., 2010). The CIA approach is founded on design thinking. According to Tim Brown the president and CEO of IDEO "Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success" (IDEO, 2016). Lastly, the CIA learning does not take place in a lecture hall instead students learn by engaging in projects and emergent problem solving in multidisciplinary teams. The CIA has four steps: the first step is to understand and observe, the next step is the brainstorming stage, the next step is the rapid, iterative prototyping and the last step is implementation. Lee and Benza (2015) has also applied design thinking in teaching innovation skills in a graduate marketing course at California State University. Gupta (2015) argues that innovation should be the central theme in teaching strategic management in business curriculum.

The University of Michigan Multidisciplinary Action Projects (MAP) course engages MBA students with organizations to work on projects to be completed in a specific time period. MAP projects are applied in four steps: the first step is definition of goals and project scoping, second step is student immersion into the project, the next step is developing a solution and the last step is the deliverables and recommendations (Datar et al., 2010).

In our study, projects were carried out in a required MBA class in Operations and Supply Chain Management (OSCM) in spring of 2013. Students were introduced to various topics related to OSCM such as strategy, operations analysis, operations planning and control, quality management, project management, lean operations, supply chain management. Besides the above traditional materials from OSCM, students were received additional presentations on BOP by another faculty who had extensive knowledge in that area. Students were also lectured on business model innovation and sustainable operations and were shown several videos and examples. Prior to choosing a subject, each student was required to do a minimum of three annotated bibliographies related to subject of their interests.

Projects' deliverables were proposal, product/service design and development, final paper, and presentation.

The proposal should identify a new product (service) that incorporate business model innovation using sustainable operations targeting the bottom of the pyramid. The proposal should also include a comprehensive literature search for uniqueness of the proposal.

The product/service design and development should provide the business model. Deliverables should include sourcing, operations, and distribution. Students could use business model canvas to help them with business modeling and presentation aid.

The final paper and presentation should provide detailed description of the project by outlining proposed company's structure, product/service offerings, market analysis, sourcing and fulfillment, pricing and promotion strategy, distribution strategy, and financial plan.

The above deliverables is evaluated by a metric (see Appendix 3). The key indicators (desired outcomes) for successful projects are addressing the following:

1. Business model innovation – Identify the innovation that you have applied in developing your product/service and making it available to your customers while having a financially sustainable business model
2. Sustainability - Environmental impact and social impact
3. BOP is the target market:
    a. How is the need of the BOP consumer met?
    b. BOP as producers
    c. Education needs of BOP

Appendix 2 shows details of projects deliverables.

STUDENT PROJECTS AND OUTCOMES

Water project

Product description

A simple ceramic water filter system that does not require any electricity, lasts three years, and does not require any maintenance.

Expected outcomes

Rather than come up with something altogether new, improve upon current products and make them available to new markets. Originally the water filter was tested in South Africa, but the student project adapted the product for The Philippines. This student aims to open a factory in The Philippines and begin production and distribution as soon as possible.

Realized outcomes

Students successfully fulfilled project expectations and moved into real-world implementation. One student traveled to the Philippines to conduct a feasibility analysis to examine profitability there, going as far as creating a legal entity to sell the filters as well as securing land for an eventual factory.

Conditions Satisfied

Sustainable Operations

This project adequately fulfills the sustainability requirement of the project because it is made with local materials including clay, sawdust, and plastic. However, it is not fully biodegradable due to the plastic component. If the factory producing this item employs locals at a livable wage or implements social programs that benefit stakeholders around the factory, it will fulfill the sustainability requirement further.

Target market-BOP

This product successfully reaches the BOP, as it addresses real, already present needs in the BOP community. In any country, the people who are always the most critically affected by natural disasters are at the BOP, because they do not have resources to protect themselves from incoming storms, and also lack the resources needed to recover. This often leads to increased hardship, such as malnutrition and lack of shelter. The Philippines is revealed to be an appropriate market for this product because access to clean water is limited due to Typhoon Haiyan's effect on local infrastructure.

Girls Clinic Project

Product description

A multi-tiered clinic system wherein the business, which produces 100% sustainable, biodegradable hygienic products, partners with local schools and doctors to provide sanitary feminine products and medically accurate information to Indian women and girls who live at the BOP. This system aims to fight the ignorance that causes stigma against women during menses. The purpose of reducing stigma is to allow women to feel safe seeking medically accurate information about their bodies, and to allow them to address their physical needs appropriately.

Expected outcomes

In a country where 96% of the women do not use hygienic products during their monthly cycles – instead opting for items which can cause infections and infertility such as dirty cloths, ashes, and plant fibers – providing hygienic products will increase the percentage of girls who can attend school after the onset of menses. It will also increase productivity among mature women (a population which currently reports at least 3 days of work off a month due to discomfort brought on by menses).

Realized outcomes

This project fulfilled each item in the assignment – it addresses many real needs at the BOP in a way that is affordable to the people who need it, created an innovative business model, and produces an item which is 100% sustainable and environmentally safe.

Conditions Satisfied

Business model innovation

This project fulfilled the Business Model Innovation factor of the assignment in that it partnered with infrastructure that is already in place in the area to maximize access to consumers. The project company will be in contact with a school, as well as a medical clinic, to reach girls and women to distribute products and information.

Sustainable operations

The product created with this project is 100% biodegradable, made from cheap, locally-sourced ingredients. Currently the cellulose used in the sanitary napkins is made from lumber, which will become increasingly expensive over time due to slow regrowth rate. However, students from MIT produced a sanitary pad manufacturing process which used cheaper and locally available products such as banana fiber in their production (Aust et al., 2010).

Target market –BOP

This product addresses many needs at the BOP. According to the Self-Determination Theory outlined in the article "Life Satisfaction, Self-Determination, and Consumption Adequacy at the Bottom of the Pyramid" by Martin and Hill (2012). BOP consumers are not defined solely by their economic status. There are also important psychological components to living at the BOP, and any company that wishes to adequately serve the BOP needs to address these psychological traits in some way. These needs include intimate and long-lasting connection to important others, perceptions of individual control over one's own actions, and belief in one's capacity to perform essential tasks. The girls' clinic project addresses each of these needs individually. First, creating long-lasting connections to important others comes into play when the girls served by the project system are connected to the women who run the machines which make the sanitary pads. These older ladies can act as leaders in their community due to owning their own business (this project also contains a micro-loan component) and producing a necessary item that makes girls' lives better. In addition to the older ladies, the project also draws the girls into contact with local physicians (already a respected position), who administer medically accurate, age-appropriate information about the changes brought on by puberty, including the onset of menses. Second, perceptions of individual control over one's own actions will be addressed when girls no longer need to skip school or stop attending altogether due to menstruation. They will take control of their own bodies and destinies by using information to dispel ignorance and stigma in their own social circles. Women who participate in the project system will also benefit from this aspect as they will be able to attend work for more time, earn more money, and reach higher esteem in society. Third, the women who operate the sanitary napkin machinery will gain confidence in their ability to fulfill essential tasks by learning skills such as creating the actual product, distributing it to local clinics, and maintaining their own business.

Student Experiences

The following paragraphs are comments from a member of the "Girls Clinic Project":

"The Bottom of the Pyramid project was important to me for a few reasons. First, it allowed me to think outside the accepted "box" of how companies are usually founded, and for what purposes they usually operate in America. Second, the project helped me develop the outline of a company that inspired me to pursue a course of action that might bring it into actual fruition. Third, the Supply Chain class itself helped mold my idea of what kind of career I wanted to pursue after completion of my MBA. In all these ways, my experience of the BOP project changed my idea of what a company can do in the world, and what I can do with a company."

"Much of the reading I had to do to expose myself to BOP concepts opened my eyes to the real needs of the population that lives at the Bottom of the Pyramid, in terms of their needs beyond an economic lack. For example, the psychological components of poverty highlighted in "Life Satisfaction, Self-Determination, and Consumption Adequacy at the Bottom of the Pyramid" (Martin & Hill, 2012) opened my eyes not just to the work that remains to be done in the world of BOP services, but to the needs of all people in the world. This article also gave me a sense of how business that cater to the BOP can be more than just a profitable idea – by fulfilling those psychological needs, companies that serve the BOP can change the well-being of their customers in a much more holistic way. This is an incredibly invigorating idea to someone who is more used to Western consumer culture, where it sometimes feels like companies squabble over disposable income and do not care about the actual lives being impacted by their actions."

"Another way that I learned about using business to positively influence the lives of stakeholders as well as shareholder profits was through the article entitled "Dynamic Capabilities and Base of the Pyramid Business Strategies" (Tashman & Marano , 2009) which outlines the concept of Peace Through Commerce. This theory points out that poverty and violence often go hand in hand for a multitude of reasons. While India is not always thought of as a "violent" nation, violence against women is pervasive. Part of this violence (which can be seen in reports of rape which has become a focus of news in this part of the world) is due to cultural attitudes that are based in ignorance. This ignorance is part of what my BOP project was aimed at, with the intent of spreading accurate information to dispel stigma associated with womanhood. The article also gives a different definition of poverty than is usually seen: "a deprivation of human capabilities or agency to exercise fundamental rights to survival, security, and freedom". The authors refer to capabilities such as education, employment, healthcare, sanitation, water, literacy, nourishment, women's rights, and security from violent conflict, and my team took care to address as many of these issues as possible in our project, including education, employment, healthcare, and women's rights."

"The BOP project also challenged my accepted norms of how a business should operate. In western culture, companies in the same sector often operate independently of one another because they see each other as competitors. When I read "Profitable Business Models and Market Creation in the Context of Deep Poverty: A Strategic View" by Seelos & Mair (2007). I saw that larger companies are not as agile and able to address the needs of BOP consumers, and smaller companies often do not have the sheer reach or material resources that is needed to cater to the large slice of the global population that comprises the BOP. This conundrum has been addressed in the past by companies in developing economies pairing together and using their relative strengths to better serve all customers while still achieving financial gain. In America, it often appears as though financial gains means compromising on real service, because the constant search for efficiency often means cutting out what corporations see as expendable factors of their business, including payoff to customers. The example posed by Seelos and Mair (2007) where a cell phone company that was aimed at social development partnered with a global telecommunications firm to enhance both businesses, gave me a new perspective on what was realistically possible with a small firm like the one I was trying to (hypothetically) create for my project. At first, my partners and I had resigned myself to a small, stand-alone clinic that had to create its own market, produce its own goods, and distribute the napkins all on its own, while still remaining profitable. This stumped me until I read the article mentioned above. Finally I realized that the teachers at the local school could reach the market we sought to engage by being established and trusted figures of authority for young girls, and doctors could provide a socially safe and acceptable place to distribute the sanitary napkins we produced. Because rural Indian culture carries deep stigma regarding menstruation (even to the point that women are told not to cook food or paint their nails during their periods for fear of ruining the results), a foreign company attempting to create a market in this arena would have insurmountable obstacles to success if this aspect did not function properly."

"Before taking this class, I – like many of my classmates – thought that I wanted to change the world for the better, but did not know how I would do it. Participating in the Bottom of the Pyramid project changed the way I looked at the responsibilities of the business world, and it deeply affected my view of what kind of change I can affect in the world as an individual. I would like to someday implement the Indian Girls' Clinics my group developed, but until then, I know I can use the principles learned in this class to make important changes here."

DISCUSSSION, SUGGESTIONS FOR FUTURE USE, RESEARCH AND IMPROVEMENT

We are hoping that the outcome of these projects as part of the MBA curriculum would produce graduates that have gained global perspective, developed leadership and integration skills, acted creatively and innovatively, and have integrated social goods in business models. Also their exposure and challenges of creating goods for the BOP, should make them much more innovative and creative for developing goods for emerging and developing markets as well.

We should emphasize that by expanding materials that were used for projects' preparation a standalone course could be developed with topics such as business model innovation or business sustainability and having prominent business people participate as mentors to teams. In our case, we used business leaders to be judges at final presentation and they also graded teams with our metrics. Another suggestion is to open these projects to students outside of business schools such as engineering, architecture, art, and science. Having teams with various background and expertise will enhance the quality of the projects.

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APPENDICES – are available upon request by contacting Shahram Taj at staj@flpoly.org

The Determinants of Student Performance in a University Marketing Class

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ABSTRACT

At a large private university, 835 undergraduate students completed a 110-question survey pertaining to an introduction to marketing class. The explanatory factors included are chosen to cover those studied in past literature as well as new pedagogical innovation variables. To test the determinants of student achievement we perform univariate and multivariate analyses to include quantile regressions on the 10^{th} and 90^{th} percentiles. The primary research objective is to provide students and instructors information on components that are most significant to learning and course outcomes. Our study allows students and instructors to give focused efforts on the factors that provide the greatest marginal benefit for student learning and outcome in an introductory university marketing class.

Keywords: Education, Business, Marketing, Pedagogy, Undergraduate, Learning, Classroom Success

INTRODUCTION

Over the past century many studies have been performed attempting to measure the variables that affect academic performance. One of the most intensive studies is that of Harris (1940) who analyzes the findings of the academic literature from 1930-1937 regarding the topic of factors affecting college grades. Munday (1970) concludes from his study of 134 universities between 1964 and 1965, that predictability is reasonably systematic. Each of these studies cover a breadth of topics and courses. However, each finds that variables such as ACT score, gender, high school GPA, student self-efficacy, work ethic, among others are viable measures of academic performance (see also Park & Kerr, 1990; Talib & Sansgiry, 2012).

The level of consistency in findings among the many studies previously performed is volatile. We presume the factors selected for our study, after extensive research on the extant literature, prove significant in trying to narrow the gap between prior research discrepancies. Some examples of variables chosen include college GPA, class attendance, required reading completed, and ACT/SAT scores. We perform a variety of tests to examine the validity of each of these variables on student course outcome. Among these tests we run regressions on different subsections of student performers, e.g., we run the main regression model but only on the top or bottom performers to allow insight in what seems to make these students perform at the various levels.

In our literature review, we discuss several previous studies and their analysis on the determinants of course outcomes. These sources cover a variety of different subjects allowing us to do comparisons across other topics of study as well. We expand on these topics by providing additional variables and determine the effects the variables have on performance. The objective is to take these variables included in previous studies and attempt to hone in on a more direct approach to a marketing class by using other, closely related business class studies applied to marketing. For example, we examine the effect of attendance in a marketing context (Stanca, 2004; Marburger, 2006). Another example is that Dills and Hernandez-Julian (2008) find transfer students perform worse that other students, on average. In our study we reach the same conclusion.

The following sections provide a review of the literature, specifically to give support to the aforementioned, and following factors used in our analysis. Again, we do not limit the literature to one specific field, rather we include all areas of academic literature. Subsequently we present our data and methods. Following data and methods is the empirical results section which highlights our findings in our multivariate regression tests, as well as quantile regression findings. We then conclude in the final section.

LITERATURE REVIEW

In preparation for this experiment, several of the variables chosen were based on previous studies. Throughout these studies, there exist some consistencies and variabilities among the results. We provide a description of the individual variables that compose the factor groups and the theoretical roots for each factor from the extant literature.

One of the most significant consistencies we find is ACT/SAT scores and college GPA (Park and Kerr, 1990; Kara, Bagheri, & Tolin, 2009). Park and Kerr (1990) report that ACT score ranks the intellectual ability before college and the GPA ranks the intellectual ability developed in college. The breadth of study on high school GPA, although not as extensive, has found some relationship with performance in various university courses (Davidobitch & Seon, 2015; Schulruf et al. 2008; Zwick & Sklar, 2005; McKenzie & Schweitzer, 2001; Stricker et al. 1996). In each of the studies, it is found that high school GPA is a strong predictor of success in college courses. Zwick & Sklar (2005) exhibit that high school GPA is a stronger predictor in first year college GPA than SAT scores.

To our knowledge, a measurement of whether or not a student is on academic scholarship at the time of the study has not been performed in previous marketing studies. All things considered, we find value added by including academic scholarship as it serves as another proxy of intelligence. Our prediction for ACT/SAT score, high school and college GPA, and students on academic scholarship consist of a positive relationship with course outcome.

A student's belief about how much they strive toward learning, academic goals, and career goals are reviewed next. It is found in several studies in various academic disciples that these three sub-factors positively influence students' performance (see Loo & Choy, 2013; Phan, 2012; Pruzer, 2011). Trine and Schellenger (1999) find that self-motivation is a significant determinant of performance in a finance course. Kara, Bagheri, and Tolin (2009) report that the expected grade at the beginning of the semester has a positive, significant correlation with grades.

Student goals are also attributed to success in challenging situations (Schweinle & Helming, 2011); research that examines and investigates the reasoning behind the drive for success. According to Schweinle and Helming, and Afzal, et al. (2010), student success is highest when they are motivated intrinsically or by mastery compared to when motivated extrinsically or through grade. Identifying the reason behind drive or motivation is a vital component in academic outcome (Vanthournout et al., 2012).

Vygotsky (1978) argues that there are differing levels of challenge that will awake the greatest drive for learning, which brings the greatest academic success, within a student. In seeking out ways to motivate students, the optimum level of challenge will help students work at their highest level of personal ability. Csikszentmihalyi (1997), among others, reminds us that flow theory is a form of positive psychology that, when in the zone, is a mental state of operation in which the person performing an activity is fully immersed in optimizing emotions and involvement within an activity.

Self-belief is the next variable we discuss. We differ from other studies because we use the measure of availability from the students themselves; previous studies have not used such student-perspective data. This allows us to test self-perception with course performance. Gladwell (2013) stated that students perform relative to how they feel—self-perception—that shapes the context of your willingness to meet challenges and complete difficult tasks. He goes on to state, "It's a crucial element in your motivation and confidence."

A variety of previous studies show that self-belief is linked to academic success and endurance among college students (Gloria et al. 1999; Lent et al. 1997; Robinson Kurpius et al. 2003). Knowing that self-belief is linked to long term academic persistence, we are curious as to the potential existence of over-confidence and the possible impact on course performance. Nonis and Hudson (2006) show that high school, on average, does not adequately prepare students for college and has an adverse effect—over-confidence. The findings of Wyatt et al. (2005) exhibits, although unrealistic belief, that over-confidence may still have an impact on success, whether it be positive or negative. In this paper we do not distinguish between realistic and unrealistic self-belief and recognize that this could create noise in the outcomes.

Murray and Wren (2003) report that the correlation of IQ with academic performance shows an interesting perspective on how skills, or ability, impact final grades. In order to separate the correlation and students' perspective of ability's impact on final grades we include the student's self-assessment in their marketing abilities and their self-assessment of personal interest in marketing.

It is believed that increased interest in a course leads to improved performance. By including the interest-in-marketing variable, we seek to determine the effects of self-rated interest in the course to the course outcomes. Kara et al. (2009) is one of several studies that show this exact belief—students with higher levels of interest in the course are more likely to succeed in that specific course (in our case marketing). Salem (2001) finds that an interaction with friends helps create an experience that may enhance their interest in the respective subject of the group. Similarly, having better relationships with peers is shown to increase the learning curve (Foy, 1994). After review of previous findings, we predict a positive correlation between marketing ability and course grade.

Our survey includes a series of variables we describe as "student bandwidth". Student bandwidth is made up of the following variables: number of credit hours a student is taking, extracurricular activity involvement, number of weekly service hours given, and number of weekly hours spent at a paid job.

Dale and Crawford (1999) state, "when jobs affect attendance they have a devastating effect on performance." Kara, Bagheri, and Tolin (2009) find that the more a student works the worse they perform in a class (see also Trine & Schellenger, 1999). Findings of the study by DeSimone (2008) report that the negative relationship between labor supply and grades are not simply attributable to less academically motivated students working long hours. Instead, students who spend longer hours in paid labor because of preference or budget constraints related to their fathers' schooling attainment and attitudes ultimately perform worse in school than they otherwise would. He also continues that rising real college costs will seemingly put added pressure on students to earn while they learn. Arano and Parker (2008) claim that, while OLS underestimates the effect of working on academic performance, student employment has a negative effect on academic performance for freshmen, but for upperclassmen, the negative effect only occurs after working long hours. They show that this negative affect is weakest for juniors, followed by seniors and sophomores. They conclude that work while in school does have its benefits as well as its opportunity costs.

Although these studies find an adverse effect on student performance, Harris (1940) among others found that work while in school is statistically insignificant and not an accurate predictor of student performance in a class. From each of these studies we see either an adverse or no relationship between the number of hours spent working and academic performance. Likewise, we can assume that the more time a student spends in service activities (less time is consequentially spent dedicated to course preparation) the worse they will perform in the course as well, although only in excess amount. Harris (1940) finds that there is a positive low, to no correlation between the number of credit hours carried and GPA in each of the four quartiles of the intelligence distribution. We predict that as students have less bandwidth to focus on (less time dedicated to) the marketing class, they will experience lower grades. Note, however, that in light of the previous literature, this is another empirical issue with no clear prediction.

Individual effort is another common topic of interest. We include several variables that we determined help measure student individual effort, such as number of hours spent per week studying for the class, number of hours spent studying during the test week for the class, attendance, percentage of assigned readings completed, hours spent with a tutor or teaching assistant, participation in a study group, number of people in the study group, and times the student goes to bed and wakes up.

Absenteeism is found to be unanimous throughout several past studies. Regular class attendance proves to reflect in a students' final grade and overall performance (Dale, 1999). Although attendance proves to be significant across all studies, the literature has various conclusions about the effect of mandatory class attendance (see Neri & Meloche, 2007; Stanca, 2004), which is outside the scope of this study. Regardless, student attendance record has been shown to be positively correlated with performance (Marburger 2001; Cohn & Johnson, 2006).

A number of studies show "introvert" behavior, compared to "extrovert" behavior, is associated with better grades (Harris, 1940). Krohn and O'Connor (2005), among others, show that the number of hours spent studying for the class at hand is negatively correlated with performance (see also Didia & Hasnat, 1998; Kara et al. 2009). Still largely unexplained, this result is found within many different studies and continues to surprise as it seems counter-intuitive. This raises the question, is there such thing as too much study? Is there an optimal amount of study that maximizes performance? Borg, Mason, and Shapiro (1989) shed some light on these questions. In their study, they separate students into two groups based on ACT/SAT scores. The group with above-average ACT/SAT scores received higher final grades as they spent more time studying. Conversely, the group with below-average scores received lower final grades as they spent more time studying. The insight we gain from this study is that it is

possible that intelligence plays a major part in individual effort. It appears that those with higher intelligence benefit more from additional studying than those with lower intelligence—the reasons why are still unknown.

Nonis and Hudson (2006) state, "It should be clearly communicated to [the students] that their abilities, motivation, and behavior work in tandem to influence their academic performance. If students are lacking in even one of these areas, their performance will be significantly lower." We use multivariate testing to control for intelligence, effort and all other effects discussed. We predict a positive correlation between individual effort and performance.

DATA AND METHODS

Our data sample for this project consists of 835 undergraduate students from a large, private university. The students were offered extra credit to complete a 110 item questionnaire. The survey was fairly extensive. There were 1,312 total students enrolled in the class rendering a response rate of 63.6%. Comparatively speaking, our response rates are excellent compared with previous studies: Graham and Harvey (2001), 8.5%; Trahan and Gitman (1995), 12%; Brau and Fawcett (2006), 18.8%; Krigman, Shaw, and Womack (2001), 34%; Brau, Ryan, and DeGraw (2006), 44.5%; and Brau et al. (2016), 60.4%.

The questions in our survey were derived by using academic literature, recommendations from professors and students, and our own ideas of what could be especially applicable to a marketing class. The survey is available upon request. Table 1 defines the primary variables of interest used in the subsequent empirical tests.

Table 1: Variable Definitions

Variable Name	Definition	Variable Name	Definition
aca_schol	Equals 1 if Academic Scholarship	interest_mkt	Interest in marketing (7-point Likert Scale)
act	ACT (on the 36 max ACT score)	major_acc	Equals 1 if Pre-Accounting Major
age	Age (16-point scale)	major_busm	Equals 1 if Pre-Business Mgmt Major
any_ta	Equals 1 if student spent any time with the teaching assistant	major_fin	Equals 1 if Pre-Finance Major
any_tutor	Equals 1 if student spent any time with the tutor	major_is	Equals 1 if Pre-Info System Major
ath	Equals 1 if student athlete	major_recm	Equals 1 if Pre-Recreational Mgmt Major
ath_schol	Equals 1 if Athletic Scholarship	male	Gender 0=female 1=male
ath_tut	Use of athletic tutor (7-point scale)	mkt_241	Equals 1 if student is in section 1
attendance	How often attend class (6-point scale)	no_mission	Equals 1 if did not serve LDS mission
byu_gpa	College GPA on a 4.0 scale	not_married	Married 0=yes, 1=no
child	Children 0=no, 1=yes	num_in_group	# of people in study group
credit_hrs	Credit hours (5-point)	other_mkt	Equals 1 if student has taken another marketing class
disability	Equals 1 if student has a University Accessibility Letter	parsib_mkt	Equals 1 if family in marketing
english	Equals 1 if English as first language	percent_read_mkt	Percentage of reading completed before class (%)
exam_daym	Day took test 1=first day 2=second day	retake_mkt	Equals 1 if retaking the class
extra_activ	Extracurricular activities (7-point scale)	sat	SAT (on a 20 point scale)
games_sem	# collegiate sports games in semester	selfrate_mkt	Skill in marketing (7-point Likert Scale)
hr_awake	Wake up time (7-point scale)	study_group	Equals 1 if in a study group
hr_bed	Time to sleep (7-point scale)	ta_hrs	Hours spent with teaching assistant
hrs_job	Hours spent at a paid job in the semester (8-point)	teach_mkt	Teach others principles from class (6-point scale)
hrs_serve	Hours serving in religious/spiritual/community (7-point scale)	tram_evt	Equals 1 if traumatic life event during semester
hrs_study_xm	# of hours/week studying during exam week (11-point scale)	transfer	Equals 1 if transfer student
hs_gpa	High School GPA on a 4.0 scale	tutor	Use of a tutor (7-point scale)

Table 2 reports the summary statistics of the data. We report the traditional OLS regression results in Table 3. Moved by the findings of Borg, Mason, and Shapiro (1989), we report quantile based regression results for the 10th and 90th percentile performers in Tables 4 and 5.

Table 2: Summary Statistics						Variable	Obs	Mean	Std. Dev	Min	Max
Variable	Obs	Mean	Std. Dev	Min	Max	interest_mkt	815	5.222	1.254	1	7
aca_schol	812	0.440	0.497	0	1	major_acc	835	0.159	0.366	0	1
act	818	26.178	8.119	1	36	major_busm	835	0.349	0.477	0	1
age	814	6.398	2.157	2	16	major_busmnr	835	0.101	0.301	0	1
any_ta	835	0.451	0.984	0	7	major_fin	835	0.157	0.364	0	1
any_tutor	835	0.195	0.714	0	7	major_is	835	0.072	0.258	0	1
ath	835	0.040	0.195	0	1	major_other	835	0.289	0.453	0	1
ath_schol	835	0.061	0.317	0	2	major_recm	835	0.059	0.235	0	1
ath_tut	835	0.086	0.543	0	6	male	816	0.662	0.473	0	1
attendance	831	5.403	1.254	0	6	no_mission	835	0.636	0.481	0	1
byu_gpa	792	3.535	0.444	0	4	not_married	835	0.836	0.371	0	1
child	835	0.022	0.145	0	1	num_in_group	835	0.362	0.834	0	6
credit_hrs	824	2.896	0.651	1	5	other_mkt	816	0.038	0.191	0	1
disability	831	0.052	0.222	0	1	parsib_mkt	833	0.200	0.401	0	1
english_2nd	835	0.922	0.268	0	1	percent_read_mkt	805	87.7	19.1	0	100
exam_daym	814	2.791	0.851	1	4	retake_mkt	835	0.057	0.233	0	1
extra_activ	814	2.455	1.376	1	7	sat	796	5.089	6.401	1	19
games_sem	835	0.049	0.257	0	2	selfrate_mkt	815	5.723	0.836	1	7
gradeperc	835	91.0	5.7	65.8	100.6	study_group	833	0.965	0.899	0	2
hr_awake	815	5.142	1.160	1	7	ta_hrs	813	1.268	0.631	1	7
hr_bed	815	5.550	0.990	3	7	teach_mkt	813	1.451	0.498	1	2
hrs_job	813	3.381	2.014	1	8	total_hrs_study	811	8.906	2.942	2	20
hrs_serve	813	3.156	0.801	1	7	tram_evt	814	0.946	0.916	0	2
hrs_study_xm	812	5.861	2.106	1	11	transfer	814	0.276	0.447	0	1
hs_gpa	814	3.755	0.292	2	4	tutor	812	1.119	0.478	1	7

We leave detailed inspection of Table 2 for the reader but make note of a few variables from the summary statistics. Since the survey was done at a Western school, more students are prone to take the ACT than the SAT. The ACT reports a mean score of 26, based on the traditional 36-point scale. The SAT on the other hand is a scaled response (i.e. a 20-point scale). The mean high school GPA is 3.75 and mean college GPA (represented by the name byu_gpa) is 3.53. We recognize that these means are fairly high, but the subset of students taking an intro to marketing class are competing with a large number of other students for admittance into a highly competitive limited enrollment undergraduate business program. Let us also make note that the intro to marketing class is a prerequisite class for the business school and the competition is very intense to earn an A or A-, as the cut-off prerequisite GPA for admission is typically 3.7 or above.

The empirical methods for this study begin with an ordinary least squares (OLS) regression using Hubler-White standard errors to correct for heteroscedasticity. We also create two control variables to give us more accurate information regarding tutor and teacher assistant use (i.e., free, qualified tutors provided by the university to work specifically with the instructor and his or her respective class for the entire semester). These variables help us measure the effect of using a tutor or teaching assistant. Subsequently, we run quantile regressions to see the effects of each factor on the high and low-performing students (i.e., 10^{th} percentile and 90^{th} percentile). Such regressions allow us to gain further insight to how students compare in performance and what influences their success. Each of these models examine the factors and variables in a multivariate setting.

EMPIRICAL RESULTS

Table 3 reports results of the grand regression, an OLS regression using Hubler-White standard errors of robustness that includes all factors previously mentioned. Again, we leave careful inspection of the table to the reader and highlight a few key results. The variables in Table 3 are listed in order of statistical significance. For flow of discussion, we cover the main findings out of order from the table in summary style. College GPA and SAT scores reported significant at the .05 level, whereas ACT was significant with a p-value of .079 and high school GPA had a p-value of .140. All of these variables have positive impact on course outcome. These results agree with Park and Kerr (1990). Following the results of Park and Kerr (1990), we also find that the number of hours spent working a job, the amount of time spent studying (during exam week), and number of credit hours currently enrolled are significant in generally determining student grades. In our study, students who study more during exam week will,

on average, obtain a higher grade. This makes sense. However, we find that the more time students spend studying during a non-exam week, the worse they perform (see Kara, Bagheri, & Tolin, 2009). Therefore, we conclude that the more time students spend studying overall for the course, the worse the outcome will be, but students who dedicate more time studying during exam week will result in better outcomes. This can potentially be explained by the general ability of a student who needs to spend more time studying throughout every week compared to students who do not (i.e. higher performing students). Through quantile regression analysis, we will be able to further explain this phenomenon as we compare the 10th percentile performers to the 90th percentile performers. This will be discussed in Tables 4 and 5.

Table 3: Ordinary Least Squares Regression with Course Grade as Dependent Variable. Variables defined in Table 1.

VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err
byu_gpa	4.254***	major_acc	1.074**	any_tutor	-1.434	games_sem	-6.186
	-0.755		-0.476		-1.221		-4.166
credit_hrs	0.924***	major_fin	1.004**	study_group	0.446	ath_tut	0.162
	-0.276		-0.42		-0.367		-0.928
attendance	0.610***	transfer	-0.922**	num_in_group	-0.241	ath_schol	-1.524
	-0.201		-0.44		-0.189		-1.751
hrs_study_xm	0.766***	act	0.0426*	not_married	-0.301	extra_activ	-0.223
	-0.218		-0.0242		-0.537		-0.136
total_hrs_study	-0.419***	hr_bed	-0.359*	child	-0.825	aca_schol	1.578
	-0.159		-0.208		-1.527		-0.981
selfrate_mkt	1.765***	hrs_job	-0.162*	hr_awake	0.164	major_is	-0.482
	-0.226		-0.0886		-0.198		-0.65
other_mkt	-3.734***	hrs_serve	-0.383*	disability	-0.363	major_recm	-0.0157
	-1.259		-0.211		-1.03		-0.773
age	0.324**	major_other	-1.026*	retake_mkt	0.769	major_busm	-0.104
	-0.155		-0.525		-0.651		-0.456
sat	0. 0583**	male	0.591	parsib_mkt	-0.448	major_busmnr	0.0112
	-0.0251		-0.446		-0.386		-0.585
percent_read_mkt	0.0250**	hs_gpa	0.983	teach_mkt	0.0336	tram_evt	-0.233
	-0.0104		-0.676		-0.341		-0.669
interest_mkt	-0.321**	ta_hrs	0.361	exam_daym	-0.0935	constant	56.88***
	-0.15		-0.57		-0.192		-4.223
english_2nd	-2.199**	any_ta	-0.0766	no_mission	0.39		
	-1.052		-0.802		-0.613	R-squared	0.461
ath	9.192**	tutor	-0.589		Robust standard errors below coefficients		
	-4.435		-0.725		*** p<0.01, ** p<0.05, * p<0.1		

We find gender is not a predictor of what the student outcome will be, counter to findings in previous studies of other courses (see Harris, 1940; Dale & Crawford, 1999; Kara, Bagheri, & Tolin, 2009; Cappellari, Lucifora, & Pozzoli, 2008; Brau et al. 2016). We find that age, however, does have a positive impact on student outcome. As students increase in age they tend to perform, on average, .33 points higher than younger students.

Neri and Meloche (2007) conclude, like others, that attendance does contribute to academic performance. In our analysis, we reach the same conclusion—students who attend class more attain a higher overall course grade. However, this comes with a caveat according to several previous studies (see Neri & Meloche, 2007; Marburger, 2006; Stanca, 2004). These studies show that while attendance is unanimously beneficial to course outcome, the effects of implementing a mandatory attendance policy adversely affects course outcome. Stanca (2004) describes this phenomenon stating that attendance should not be made compulsory:

> A compulsory attendance policy would distort the opportunity cost of absenteeism and impose a welfare loss on students. In addition, besides the fact that a captive audience is not a good learning environment, compulsory attendance would take away an important signal for lecturers on the quality of their teaching. The solution to the problem of high levels of academic absenteeism is not to make attendance compulsory, nor to design exams so as to make attendance necessary, but to

> improve the quality of our teaching, in terms of both content and format, to provide students with the right incentives and let them vote with their feet (Stanca, 2004 p. 17-18).

Such findings grant insight to the power of student personal accountability and agency, and how it is reflected in their collegiate performance.

We find another interesting variable that complements the work of Brau et al. (2016). On average, the percentage of reading completed by the student has a positive correlation with student grades. These findings do not seem out of the ordinary and align with our predictions.

One of the most interesting results we find is the difference in performance between native English speakers and non-native speakers. Our results show, counterintuitively, that native English speakers underperform compared to non-native speakers by approximately 2.20 percent. This result is statistically significant with a p-value of .037.

Next we direct attention to Table 4, which shows the results of the 10th percentile performers. Following Table 4 we discuss the results in Table 5, which displays the 90th percentile performers. Finally, we compare the significant findings of 90th percentile performers and the significant findings of the 10th percentile performers in Table 6. This comparison sheds light on the average findings relative to low and high achieving students.

Table 4: Quantile 10th Percentile Regression with Course Grade as Dependent Variable. Variables defined in Table 1.

VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err
hs_gpa	4.293***	sat	-0.0333	hrs_job	-0.0435	ath_tut	-1.199
	-1.511		-0.0628		-0.215		-1.62
byu_gpa	8.433***	percent_read_mkt	0.0148	hrs_serve	-0.287	extra_activ	-0.32
	-0.937		-0.0218		-0.486		-0.312
selfrate_mkt	2.034***	hrs_study_xm	0.438	disability	-1.932	aca_schol	-0.424
	-0.544		-0.512		-1.894		-2.087
credit_hrs	1.438**	total_hrs_study	-0.197	retake_mkt	2.219	major_acc	1.082
	-0.65		-0.378		-1.647		-1.267
attendance	0.920**	ta_hrs	0.745	interest_mkt	-0.215	major_is	0.0451
	-0.427		-1.398		-0.364		-1.625
ath	18.75**	any_ta	-1.614	parsib_mkt	-1.271	major_recm	0.554
	-8.853		-2.102		-0.967		-1.842
ath_schol	-8.742**	tutor	0.644	other_mkt	-1.759	major_busm	0.0853
	-4.388		-1.746		-2.152		-1.102
hr_awake	0.842*	any_tutor	-4.565	teach_mkt	-0.262	major_busmn	0.731
	-0.442		-2.883		-0.816		-1.329
major_fin	2.339*	study_group	0.171	exam_daym	-0.127	major_other	-1.713
	-1.211		-0.797		-0.48		-1.172
transfer	-2.003*	num_in_group	0.466	no_mission	0.676	tram_evt	0.285
	-1.051		-0.494		-1.255		-1.364
male	-0.454	not_married	-0.368	english_2nd	-1.397	constant	20.43**
	-1.05		-1.258		-2.046		-9
age	0.267	child	-1.45	games_sem	-4.027		
	-0.295		-2.91		-6.061	R-squared	0.388
act	-0.0117	hr_bed	-0.787		Robust standard errors below coefficients		
	-0.0557		-0.506		*** p<0.01, ** p<0.05, * p<0.1		

The 10th percentile performers render interesting results that vary slightly from the average. High school GPA and college GPA have significant positive impact on student performance. Interestingly, and almost counterintuitively, the more credit hours these students take, the better they tend to perform. This follows the findings of Zwick and Sklar (2005) that high school GPA is a stronger predictor in first year college GPA than SAT scores, as neither ACT nor SAT scores are found to be statistically significant variables for these students in an introductory, pre-requisite course.

Consistent with previous findings, voluntary attendance increases the likelihood of success for these lower performing students. One variable that strikes academic appeal is the result of their self-assessment of marketing skills. We find that the more confident students feel about their marketing abilities, the better their outcome. This finding fits with the statements made by Malcolm Gladwell (2013) that students' perceptions of their own abilities are reflected in how they perform (with a p-value of 0.000 and a coefficient of 2.07). This means that their confidence, on average for the lower performing students, can improve their overall outcome by roughly two percentage points. Lastly, transfer students and students who wake up later underperform.

90th percentile performers reveal a mixture of results as well. Consistent with our OLS regression, college GPA, SAT score, percentage of reading completed, and time spent studying during exam week render positive correlation with student performance, while total hours spent studying (including hours spent studying during non-exam week) has a negative correlation with student performance.

Table 5: Quantile 90th Percentile Regression with Course Grade as Dependent Variable. Variables defined in Table 1.

VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err
byu_gpa	2.955***	act	0.036	hrs_serve	0.0496	ath_schol	-1.884
	-0.462		-0.0275		-0.24		-2.166
percent_read_mkt	0.0301***	credit_hrs	0.363	disability	0.967	extra_activ	-0.0965
	-0.0108		-0.321		-0.935		-0.154
num_in_group	-0.636***	attendance	0.25	retake_mkt	0.51	major_acc	0.624
	-0.244		-0.211		-0.813		-0.625
selfrate_mkt	0.963***	ta_hrs	-0.148	interest_mkt	-0.0208	major_fin	-0.0847
	-0.268		-0.69		-0.18		-0.598
english_2nd	-2.624***	any_ta	1.046	parsib_mkt	-0.252	major_is	-0.711
	-1.01		-1.038		-0.477		-0.802
aca_schol	2.828***	tutor	-0.716	other_mkt	-0.0619	major_recm	0.667
	-1.03		-0.862		-1.062		-0.909
male	1.055**	any_tutor	0.736	teach_mkt	-0.107	major_busm	-0.368
	-0.518		-1.423		-0.403		-0.544
hrs_study_xm	0.630**	study_group	0.0125	exam_daym	0.0643	major_busmnr	0.346
	-0.253		-0.394		-0.237		-0.656
total_hrs_study	-0.402**	not_married	0.389	no_mission	-0.519	major_other	-0.387
	-0.187		-0.621		-0.62		-0.578
tram_evt	-1.385**	child	-0.0249	ath	5.38	transfer	-0.537
	-0.673		-1.437		-4.37		-0.519
sat	0.0588*	hr_bed	-0.239	games_sem	-1.064	constant	73.76***
	-0.031		-0.25		-2.992		-4.443
age	0.226	hr_awake	0.0825	ath_tut	-0.63		
	-0.146		-0.218		-0.799	R-squared	0.206
hs_gpa	0.635	hrs_job	-0.114		Robust standard errors below coefficients		
	-0.746		-0.106		*** p<0.01, ** p<0.05, * p<0.1		

An overall difference we find from the whole-sample OLS regression and the 10th percentile performers is that males outperform females by about 1.09 percent with a t-stat of 2.13 and a p-value of .033. This poses some interesting intuition regarding an intro to marketing course. It appears, according to our findings, that the only group of students affected by gender is the top 10 percent of students. Another very interesting result, consistent with our OLS regression, is that students who do not speak English as their first language perform better than native English speaking students by about 2.66 percentage points. Although it seems counterintuitive, especially in a marketing course where communication is so critical, with such a big difference in performance, the p-value ($p > .007$) is highly significant. Along with these findings we note that students who were on academic scholarship at the time they took the course outperformed those who were not by 2.37 percent, which is another intuitive result. Students who have earned an academic scholarship typically earn them because of their previous academic achievements, distinguishing them from other students. All groups have positive correlation in performance with their self-rated marketing abilities, which further confirms the power of positive thinking and confidence on achievement.

Table 6: Key Results Comparing 90th Percentile Performers with 10th Percentile Performers							
90th Percentile Performers				10th Percentile Performers			
VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err	VARIABLES	Coeff/Std Err
byu_gpa	2.955***	male	1.055**	hs_gpa	4.293***	ath	18.75**
	-0.462		-0.518		-1.511		-8.853
percent_read_mkt	0.0301***	hrs_study_xm	0.630**	byu_gpa	8.433***	ath_schol	-8.742**
	-0.0108		-0.253		-0.937		-4.388
num_in_group	-0.636***	total_hrs_study	-0.402**	selfrate_mkt	2.034***	hr_awake	0.842*
	-0.244		-0.187		-0.544		-0.442
selfrate_mkt	0.963***	tram_evt	-1.385**	credit_hrs	1.438**	major_fin	2.339*
	-0.268		-0.673		-0.65		-1.211
english_2nd	-2.624***	sat	0.0588*	attendance	0.920**	transfer	-2.003*
	-1.01		-0.031		-0.427		-1.051
aca_schol	2.828***			Robust standard errors below coefficients			
	-1.03			*** p<0.01, ** p<0.05, * p<0.1			

IMPLICATIONS FOR MARKETING EDUCATORS

Clearly a number of the determinants of student performance in the introductory marketing course are outside the control of the instructor (e.g., GPA, ACT score, age). For marketing educators, our research findings identify a number of student performance determinants that instructors may influence. The most obvious implications are that marketing educators should encourage students to prepare prior to class, attend class, and prepare for exams, especially during the exam week. These recommendations are not new or novel; however, our paper provides empirical evidence for these oft-given recommendations. We note as well that the determinants of success for students in the 90th percentile differ from those of students in the 10th percentile. That is, for top performers, the primary determinant influenced by the instructor is preparation for class. For students in the 10th percentile, the primary determinant influenced by the instructor is class attendance. Although this current paper is limited in scope to a university marketing class, readers are directed to Brau, et. al (2016) for an analysis of an introductory finance class.

CONCLUSION

In conclusion, our analysis yields results consistent with most previous studies performed, while revealing some new insights. We find that a student's academic performance can be influenced by a series of different factors. College GPA, class attendance, percent of reading completed, self-rated marketing ability, and hours spent studying during exam week all have a positive impact on grades. Other factors, such as the later a student wakes up, English as a native language, and weekly hours spent in employment have a negative impact on grades. To our surprise marital status, having children, and retaking the class returned inconclusive results. Proceeding with more in-depth analysis by conducting quantile regressions to measure the effects of the variables on the bottom and upper 10th percentiles, we identify the differences of various performing students. Overall, our paper adds to the discussion of business education and serves as a resource for instructors and students alike.

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A Comparison of Factors Affecting Student Performance and Satisfaction in Online, Hybrid and Traditional Courses

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ABSTRACT

While numerous studies have contrasted the outcomes between online and traditional class formats, few have examined the effectiveness of the hybrid delivery method in business education settings. This paper presents and tests a model for analyzing factors affecting student performance and satisfaction with instructional format across three delivery methods. Specifically, the paper hypothesizes that opportunities for greater participant interaction, course clarity, and learner control may be distinct advantages of hybrid courses leading to greater student satisfaction and performance.

Keywords: hybrid, online, delivery mode, student satisfaction and performance

INTRODUCTION

Interest in online course delivery has increased significantly in the last decade. As a result, more courses are now supported by online technology or offered fully online. Business schools have been among the most proactive in terms of using online course delivery methods. Despite favorable trends toward the adoption of online learning, a dilemma pertains to the extent to which online technologies should be incorporated within business courses.

At one extreme, *traditional face-to-face* teaching is used where all lecture/discussion is conducted face-to-face in the classroom. At the other extreme, *purely online* courses deliver all course content online often through a course delivery platform such as Blackboard or Moodle. However, a third option, the *hybrid*/*blended* course has emerged. This approach blends online learning with the traditional face-to-face classroom format. Some suggest the hybrid approach may provide the "best of both worlds" and further enhance the learning outcomes of students beyond those achieved in either traditional classroom settings or purely online delivery methods (Garrison and Kanuka 2004; Klein, Noe, and Wang 2006).

While hybrid courses have grown in popularity, researchers have only recently begun to study this course delivery method in business education settings. A literature review conducted by Arbaugh (2014) reported that the vast majority of studies pertaining to course delivery compared purely online courses with traditional classroom-based courses. In a comprehensive search for peer-reviewed articles published between January 1, 2000 and December 2013, Arbaugh found 338 articles that examined online and/or hybrid learning in business and management education. Of these articles, 59 specifically addressed hybrid learning. Very few compared online, hybrid and traditional delivery methods simultaneously.

Furthermore, previous studies examining hybrid and online learning have generally not attempted to explain why or under what conditions one method may be more effective than another. This paper presents a conceptual framework for analyzing factors affecting student performance and satisfaction across online, hybrid and traditional course delivery methods. More specifically, the paper proposes that opportunities for enhanced participant interaction, improved course clarity, and higher levels of learner control may be distinct advantages of hybrid delivery methods leading to greater student satisfaction and performance.

DEFINITIONS OF DELIVERY METHODS

Until recently, business education research has generally failed to explicitly define what constitutes an online, hybrid, or traditional course. The lack of specificity in indicating the degree of blending within courses has limited researchers' ability to determine the conditions under which online, hybrid or traditional learning is most appropriate (Kellogg and Smith 2009). Consequently, the three delivery modes are formally defined below.

Defining what constitutes a hybrid learning environment has been a challenge. According to Colis and Moonen (2001) hybrid learning is a blend of "traditional face-to-face and online learning so that instruction occurs both in the classroom and online, and where the online component becomes a natural extension of traditional classroom learning." The categorization of a course as hybrid is a function of the amount of instruction provided face-to-face versus online. The cutoff for this categorization differs by researcher. However, consensus is emerging that a hybrid course combines online learning with traditional face-to-face class time where between 30% and 79% of course content and activities are delivered online (Allen, Seaman and Garrett 2007; Arbaugh 2014).

The definition of "online" also varies widely. In a body of reviewed research, McFarland and Hamilton (2006) found an "online" course could alternatively mean; (1) a course having materials delivered online that does not meet synchronously, and does not meet face-to-face; (2) a course having materials delivered online that meets synchronously and regularly; or (3) a course delivered by videoconferencing, where a live instructor is lecturing in one location and students are viewing the lecture somewhere else. For the purposes of this research, an online course is one where at least 80% of the content is delivered online. Purely online courses have no face-to-face interaction between the instructor and students and among students (Allen, Seaman and Garrett 2007).

Traditional instruction is characterized by student and faculty interaction via lectures, discussion and exams on campus at scheduled times and days (Terry 2007). However, even defining what constitutes a traditional course is complicated by today's technology driven instruction. The majority of business instructors today incorporate some mode of online communication or course content delivery even if the vast majority of instruction takes place in a face-to-face setting. For the purposes of this research, a traditional course is one which regularly meets in a face-to-face setting where 0 to 29% of the content is delivered online (Allen, Seaman and Garrett 2007).

PREVIOUS RESEARCH AND HYPOTHESES

Despite the limited number of studies focusing on the hybrid model, some observers believe this approach can offer unique benefits to students by combining the flexibility of online instruction with the interactivity of classroom settings (Arbaugh 2014). The following provides a rationale explaining why and under what conditions hybrid learning may enhance learning outcomes such as student performance and satisfaction.

Performance and Satisfaction

Much of the existing research in business literature has focused on contrasting the outcomes between traditional and purely online courses. Specifically, many studies have focused on the outcomes of student performance and student satisfaction. Generally, these studies have shown no significant difference in student performance (measured by test scores, course grades, or performance of learned content) when comparing purely online and traditional courses (Arbaugh, 2000; Borthick and Jones 2000; Kock et al. 2007). On the other hand, studies have shown significantly lower student satisfaction with the online delivery method compared to traditional face-to-face courses (Carr 2000; Rivera and Rice 2002; Schoech, 2000; Weber and Lennon 2007).

Research comparing the outcomes of online, traditional and hybrid courses has been scarce. To date, the few studies that have compared hybrid with online delivery or traditional delivery generally have shown favorable results for the hybrid format. For example, Means,Toyama, Murphy, Bakia, and Jones (2010) using hybrid studies in their meta-analysis, found that hybrid courses demonstrated stronger learning outcomes than did face-to-face courses. In other studies, hybrid courses have been shown to yield higher skill development (Chen and Jones 2007; Kovack, Miley, and Ramos 2012) and higher course performance (Clouse and Evans 2003; Hamilton and Te 2010; Keith and Simmers 2013; Terry 2007) relative to purely online or face-to-face classroom based offerings. Similarly, other studies report higher student satisfaction and lower drop-out rates with hybrid courses compared to purely online (Black 2002; Hara and Kling 2001; Terry 2007).

Although most of these studies did not compare hybrid, online and traditional courses concurrently, the collective findings suggest that students taking a hybrid version of a business course may have greater satisfaction with the course and higher course performance as compared to students taking the same course in a purely online or traditional format.

Hypothesis 1a: Students participating in hybrid courses will report higher levels of satisfaction compared to students participating in purely online or traditional courses.

Hypothesis 1b: Students participating in hybrid courses will achieve a higher performance level compared to students participating in purely online or traditional courses.

Participant Interaction

The hybrid course delivery setting may yield more positive outcomes due to the opportunity for interaction and collaboration with fellow students and the instructor. This format not only requires students to communicate online, but also to attend a certain number of classroom meetings with the instructor. Thus, a student enrolled in a hybrid course has the opportunity for more face-to-face interaction than a student enrolled in a purely online course. This face-to-face interaction may foster relationships and give students a stronger sense of class community.

In addition, the text-based computer-mediated communication (CMC) that is used in online learning for discussion forums and other group communication may promote a level of reflective interaction that is often lacking in a traditional classroom. Students in hybrid classes not only interact face-to-face, but also may participate in online discussion where they have time to read messages, reflect on them, and write thoughtful responses. Thus, hybrid courses offer students a greater range of opportunities to collaborate and interact with each other and the instructor than either online or traditional courses. Some preliminary research supports this proposition. In a comparative analysis of hybrid, traditional and fully online graduate courses, Rovai and Jordan (2004) found that hybrid courses produced a stronger sense of community among students than either traditional or fully online courses.

Preliminary research in online business education has found interaction between students, fellow students, and the instructor to be a prominent predictor of course outcomes (Arbaugh and Rau, 2007; Brower 2003). Swan (2001) found that most students who reported higher levels of interaction with their instructor and peers also reported higher levels of satisfaction and learning. Graham and Scarborough (2001) supported Swan's findings with a survey showing that 64% of students felt that having access to a group of students was important. Similarly, other studies have reported strong associations between interactive teaching styles and high levels of learner satisfaction and learning outcomes (Arbaugh, 2000; Swan, 2001).

In contrast, a common complaint about purely online courses is the lack of personal interaction between students and professor. Hara and Kling (2001) found that feelings of isolation were an important stress factor for online students. Insufficient interactions of students with peers and faculty are likely to result in a low sense of community and feelings of isolation causing dissatisfaction and lower performance.

Hypothesis 2a: Higher levels of perceived interaction between the instructor and students and among fellow students will be associated with higher levels of student satisfaction.

Hypothesis 2b: Higher levels of perceived interaction between the instructor and students and among fellow students will be associated with higher levels of student performance.

Hypothesis 2c: Students will report higher levels of perceived interaction in hybrid courses compared to purely online and traditional courses.

Learner Control

Learner control refers to the extent to which students are given control over instructional features that influence the pace, content and structure of the learning environment (Brown, 2001). In other words, learner control is the extent to which students can choose what, when, where, and how to learn (Kraiger & Jerden, 2007). Examples of high level learner control include giving students the choice of what instructional content to view, when and in what order to view that content, or whether to complete optional quizzes. Thus, learners are given more control over their own instruction and can follow a more individualized approach. A key benefit of high learner control is that students can structure their learning environment to suit their particular needs.

Several studies indicate that pacing is an important incentive for students when selecting online courses (Richards & Ridley, 1997; Roblyer, 1999; Wilson & Whitelock 1998). Students like the opportunity to choose both when and where to learn. When students can control the pace of learning, satisfaction with the course improves (Runnels, Thomas, Lan, Cooper, Ahern, Shaw and Liu, 2006).

Klein, Noe and Wang (2006) found that students in hybrid classes were more motivated to learn and had higher course grades than students in traditional classrooms. They noted a primary difference between hybrid and traditional classes was the additional technology used in hybrid courses which gave students more control over when and where they learned and provided more tools to facilitate learning. Others have noted that these approaches allow instructors to change how class time is used to better tailor opportunities for student learning. Additionally, White and Ploeger (2004) suggested that while the traditional class is instructor-centric and sequential, the properly designed hybrid or online class is learner-centric where students are able to non-sequentially review and refer back to materials as they need them. A wider variety of learning tools which are conveniently accessible should provide opportunities for improved student performance.

Hypothesis 3a: Higher levels of perceived learner control will be associated with higher levels of student satisfaction.

Hypothesis 3b: Higher levels of perceived learner control will be associated with higher levels of student performance.

Hypothesis 3c: Students will report higher levels of perceived learner control in hybrid and online courses compared to traditional face-to-face courses.

Course Clarity

Clarity is defined as the quality of being easily understood. Course clarity is crucial to the success of student learning. It may be achieved through (1) clearly communicating course objectives, procedures, and expectations; (2) organizing course materials into logical and understandable components; and (3) presenting material in ways that students can easily follow (Eom, Ashill and Wen, 2006).

Some comparative studies of online and traditional classroom settings have found that perceived ambiguity (i.e., the opposite of clarity) is higher in online courses. Perceived ambiguity occurs when students lack clear information regarding course objectives and expectations, methods for fulfilling known course expectations, and/or consequences of performance of those expectations. Some suggest that hybrid course formats provide students with the possibility of clarifying instructions. Students do not appear to be as distraught with hybrid courses because they have the option of seeking answers to questions in person with either fellow students or the instructor (Hwant and Arbaugh 2009).

Kock, Verville, and Garze (2007) found that while perceived ambiguity was higher and grades were lower in online courses than in traditional courses early in the semester, these differences no longer existed by the end of the course. This progression suggests that a hybrid format may offer the opportunity to accelerate the process where new online students become more comfortable with learning online. When students are confident of course objectives, procedures and expectations and can follow the instructors method of presenting material, they should be more satisfied with the course and achieve better performance.

Hypothesis 4a: Higher levels of perceived course clarity will be associated with higher levels of student satisfaction.

Hypothesis 4b: Higher levels of perceived course clarity will be associated with higher levels of student performance.

Hypothesis 4c: Students will report higher levels of perceived course clarity in hybrid and traditional face-to-face courses compared to online courses.

RESEARCH DESIGN

Course Format Descriptions

The purpose of this study was to: (1) compare the efficacy of the three delivery modes using a multi-disciplinary sample; and (2) determine what factors might contribute to student performance and satisfaction across the three delivery modes. To this end, the study examined three different courses (i.e., Management Information Systems, Retailing and E-Commerce, and Entrepreneurship), taught using three delivery modes (i.e., online, traditional, and

hybrid). The same instructor taught all three versions of the same course. To ensure courses within each discipline were comparable, instructors used the same text, course outlines, assignments, assessments and grading standards across all three delivery modes. Course formats are described as follows.

Online courses. For the online courses in this study, content was delivered exclusively online. All sections used Moodle as the course management system. Course materials in the form of voice-over PowerPoints, streamed videos, lecture notes, text based supplementary materials, external links, discussion forums, and online quizzes were offered through the course management system. Students met face-to-face two times during the term to take a mid-term and final exam.

Traditional courses. Students in traditional course sections met face-to-face either twice a week or three times a week where the instructor used a lecture/discussion format. The traditional course sections also used Moodle as a course management system, but did so only to support classroom activities (e.g., posting the syllabus, grades, slides and notices from the instructor). Approximately, 90% of course content (excluding assigned readings) was delivered face-to-face by the professor. All major exams were administered in the classroom.

Hybrid courses. Students in hybrid courses met face-to-face in the classroom approximately once a week for class lecture/discussion. Instructors used a 50-50 blend where each hybrid course substituted online instruction for approximately one half of the term's class periods. All major exams were administered in the classroom.

Sample

The sample consisted of students enrolled in 13 different sections of business courses offered at a private regional university. Students self-selected whether to enroll in an online, hybrid or traditional course format. At the conclusion of each course, students were asked to complete a questionnaire. They were informed that participation was voluntary and that all results would be kept confidential. After final course grades were submitted to the university, each student's survey results were matched to his/her final course grade. All names and identifying markers were removed from the questionnaires before they were passed to the researcher who performed the coding and data entry.

Data collection occurred over two consecutive semesters during a single academic year. A total of 178 students completed surveys. Most participants (104 of 175) were in the 20-24 age range. Fifty-one percent were women. The vast majority were undergraduate students (98.3%), who worked an average of 23.4 hours a week and were enrolled in an average of 4.5 courses per semester.

Measures

*Student Performance***.** Student performance was assessed using each student's final numeric grade earned in the course. Previous studies have used grades to reflect performance and student mastery of the material covered in the course (Klein, Noe, Wang 2006; McFarland and Hamilton 2006; Rivera and Rice 2002). In all classes, regardless of delivery mode, final grades were based on exam scores and other assessments. The additional assessments included a combination of team projects, quizzes, and/or written assignments. Within each discipline, instructors used the same assessments, procedures, and criteria across the three delivery modes to determine final grades. Course grades were obtained from instructor records at the conclusion of the term.

Student Satisfaction. Student satisfaction with the course was assessed using a 3-item scale. The items for satisfaction were adapted from prior research (Estelami 2012; Klein, Noe, and Wang 2006; and Rivera and Rice 2002). Questionnaire items addressed overall student satisfaction, satisfaction with the course format, and whether students were willing to enroll in a similar course in the future. Students rated their agreement with each item (e.g., "Overall, I was satisfied with this course") using a 5-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree". The internal consistency reliability estimate, Cronbach's Alpha, for this scale in this study was .89.

*Participant Interaction***.** Participant interaction was assessed using a four-item scale adapted from a subscale developed by Eom, Wen and Ashill (2006). After conducting an extensive literature review, they designed a list of items they believed were logically associated with the factors in their model, one being participant interaction. Their measurement model was validated through factor analysis, reliability analysis, and correlation analysis. Results provided support for the reliability and convergent and discriminant validities of the measures used in their study. In the present study, students rated their agreement with each item (e.g., "I frequently interact with other students in

this course") using a 5-point Likert scale. The internal consistency reliability estimate, Cronbach's Alpha, for this scale in this study was .82.

Course Clarity. Course clarity was also assessed using a five-item scale adapted from the Eom, Wen and Ashill (2006) measurement model. Similarly, students rated their agreement with each item (e.g., "Course objectives and procedures were clearly communicated") using a 5-point Likert scale. The internal consistency reliability estimate, Cronbach's Alpha, for this scale was .89.

*Learner Control***.** Learner control was measured using a three-item scale adapted from Copcha and Sullivan (2008). Students rated their agreement (e.g., "I could learn course material at my own pace") using a 5-point Likert scale. Items were designed to measure student perceptions of how, when and in which order they could complete coursework. This conceptualization included not only pace control but other facets of control important for student self-regulation. The internal consistency reliability estimate, Cronbach's Alpha, for this scale was .73.

Control Variables. The researchers also measured demographic variables to assess the comparability of students across the three delivery modes. Specifically, the researchers measured age (1=<20, 2=20-24, 3=25-34, 4=35-44, and 5= >44), gender (1=Male, 2=Female), and the number of hours worked each week.

FINDINGS

The means, standard deviations, and correlations among the variables in the study are shown in Table 1. As depicted in the table, individuals reported generally positive levels of satisfaction, clarity, and interaction. Additional analysis found satisfaction and interaction were highest in the traditional delivery method ($\bar{x}$=4.04 and 4.11) and lowest in the online method ($\bar{x}$=3.87 and 3.67). Interestingly, clarity, while high in all three methods, was highest in the online delivery method ($\bar{x}$=4.48) and lowest in the traditional delivery method ($\bar{x}$=4.27). This is interesting in that clarity was also highly correlated with all of the variables of interest in our study. The high correlation between student satisfaction and clarity (r (178)=.60, p<.001) suggests the importance of clear expectations and organization regardless of the delivery method. This is further emphasized when, as shown in the table, performance is significantly positively correlated with all of our variables of interest. The lack of any significant negative correlations between the variables of interest reinforces the expectation that improvements in course as well as individual perceptions will be beneficial.

Table 1: Means, Standard Deviations, and Intercorrelations Among all Variables

		M	SD	1	2	3	4	5	6	7	8
1	Instructor	1.93	.05								
2	Age	2.61	.92	-.23**	--						
3	Gender	1.51	.50	-.02	.08	--					
4	Performance	76.92	11.45	.08	-.07	.12	--				
5	Satisfaction	3.99	.96	.13	.06	-.04	.23**	--			
6	Interaction	4.00	.78	-.04	-.05	-.12	.28***	.41***	--		
7	Clarity	4.33	.61	.04	.21**	.08	.23**	.60***	.34***	--	
8	Control	3.80	.76	.07	.05	.04	.15*	.49***	.42***	.45***	--
9	Motivation	3.60	.66	.011	.26**	.08	.20**	.17*	.05	.20**	.10

NOTE: n=178, * p< .05, ** p< .01, ***p<.001

Additional analysis of delivery method (1=traditional, 2=hybrid, and 3= online) revealed that while there was no significant correlation between student performance (r(177)=-.07, p>.05) or satisfaction (r(178)=-.07, p>.05) and delivery method, there was a significant negative correlation between delivery method and student interaction (r(178) = -.22, p<.01), indicating lower perceived interaction with others as the course becomes more remote. Additional analysis also found significant correlations between delivery method and age (r(175)=.69,p<.001), gender (r(176)=.25,p<.001), and hours worked (r(175)=.59,p<.001) indicating that there are some differences in the student populations selecting different delivery methods.

Correlation analysis showed there were no significant correlations between any of the control variables (instructor, student gender, and student age) and student satisfaction or performance, so t-tests were used to test many of the hypotheses.

There was insufficient evidence to suggest a significant difference between the satisfaction of students in hybrid courses, as compared to either traditional ($t(137) = -.401$, $p > .05$) or online ($t(71) = .381$, $p > .05$) failing to support Hypothesis 1a. There was also not enough evidence to suggest a significant difference between the performance of students in hybrid courses, as compared to either traditional ($t(136) = .476$, $p > .05$) or online ($t(71) = 1.415$, $p > .05$) failing to support Hypothesis 1b.

Significant correlations between student interaction and student satisfaction ($r(178) = .41$, $p < .001$) and student performance ($r(177) = .28$, $p < .001$) provide support for Hypothesis 2a and 2b respectively. For Hypothesis 2c there was insufficient evidence to suggest a significant difference between student interaction in hybrid courses, as compared to traditional ($t(137) = -.527$, $p > .05$), however there was a significant difference in perceived interaction between hybrid and online courses ($t(71) = 2.08$, $p < .05$) providing partial support for Hypothesis 2c.

Support for Hypothesis 3a and 3b respectively was indicated by significant correlations between perceived learner control and student satisfaction ($r(178) = .49$, $p < .001$) and student performance ($r(177) = .15$, $p < .05$) respectively. Hypothesis 3c was not supported as there was no significant difference in the perceived learner control between either the hybrid and traditional ($t(137) = -.199$, $p > .05$) or online and traditional courses ($t(142) = 1.44$, $p > .05$).

Significant correlations between perceived course clarity and student satisfaction ($r(178) = .60$, $p < .001$) and student performance ($r(177) = .23$, $p < .01$) provide support for Hypothesis 4a and 4b respectively. Hypothesis 4c was not supported as there was no significant difference in the perceived course clarity between either the online and traditional ($t(142) = --1.918$, $p > .05$) or online and hybrid ($t(71) = -1.008$, $p > .05$) courses.

CONCLUSIONS

The presented framework attempts to set up a structure for analyzing factors affecting student performance and satisfaction across online, hybrid and traditional course delivery methods. Hypotheses are presented which help explain how participant interaction, learner control and course clarity may affect student satisfaction and performance and which may differ across the three delivery methods.

Our results show that participant interaction, learner control, and course clarity are related to student satisfaction, regardless of course delivery method and across all instructors and disciplines. The same result is found for all three variables in regards to student performance. Collectively, these are significant findings. Most importantly, this understanding allows educators to shift their focus from delivery method to other course design factors when working to improve student outcomes.

Given the current literature, the finding of no difference in student satisfaction or in student performance across the three delivery methods was unforeseen. This may indicate that previous studies were actually finding differences at the instructor level rather than with the delivery method itself.

It was also unexpected that students failed to report higher levels of participant interaction, learner control, and course clarity in hybrid courses. It is possible that earlier studies that found hybrid comparing favorably with online were in fact showing differences in instructor, text, or course design.

Another finding that was counter to expectation was that students reported higher levels of course clarity in online sections than either traditional or hybrid ones. It was thought that students would experience more ambiguity and confusion in the online setting, since there are fewer opportunities to clarify course expectations and instructions. This may indicate that the online format requires instructors to spend more time explaining course parameters to help alleviate any shortcomings with the online delivery method.

LIMITATIONS AND FUTURE RESEARCH

This study has several strengths, mainly due to its design. While existing research compares the efficacy of different delivery methods, it is unusual to have three different methods taught by the same instructor during the same time period. This removes the potential contamination of instructor style or capability. In addition, all of the courses were within the school of business, which removes discrepancies due to subject matter and type of student.

The main limitation of the study is that all of the data was collected from a single university over the course of a single year. Additionally, although the overall sample size was fairly large (a total of 178 completed surveys), the size for the non-traditional sections was relatively small (ranging from 34 in the hybrid sections to 39 in the online sections). Future research should focus on examining the different methods of delivery across multiple organizations in order to increase the robustness of the findings.

Given the sole use of students in this study, caution should be used when making generalizations based only on these findings. It is suggested that students are the primary focus of research into teaching and pedagogy, and thus are an appropriate sample. Future research should examine the generalizability of the findings to a non-student sample.

Data were collected from students enrolled in online, hybrid and traditional versions of retailing, entrepreneurship, and management information systems classes. Results showed that participant interaction, course clarity, and learner control were positively related to student satisfaction and performance, regardless of delivery method and across all instructors and disciplines. Contrary to expectations, no significant differences in satisfaction and performance were found among the three deliver methods. Results suggest when the instructor, text, and course design are held consistent across delivery methods, there are no significant differences in student satisfaction and performance.

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A Preliminary Study of Changes in Online Graduate Business Student Perceptions Over a Course

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ABSTRACT

Prior research indicates that as students experience more online courses, their perceptions of the online environment compared to the face-to-face learning environment change. This study evaluates the perceptual changes for graduate students *over a single course*. Over the semester, graduate student perceptions with respect to motivation, difficulty and cheating changed, while student perceptions of self-directed preference, independence, time and cost investment, difficulty, schedule flexibility, happiness and appropriateness of online education did not. In general, differences in perceptions between novice and more experienced learners did not exist. These results have implications for both instructors and administrators.

Keywords*:* Student perceptions, online, graduate students

LITERATURE REVIEW

As indicated by a recent Babson Survey, the use of online education in higher education is on the rise, and many academic administrators believe that online education learning is the same or superior to those in traditional face-to-face (FTF) classrooms (Allen & Seaman, 2013). Contrastingly, others argue that due to intrinsic differences, learning through online education does not replicate the learning in the FTF classroom (Bejerano, 2008). With this increase in online courses, several studies evaluated both student perceptions and student performance in the online environment (e.g. Allen & Seaman, 2013; Braunscheidel, Fish & Shambu, 2013; Fish, 2015; Fish & Snodgrass, 2014, 2015; Perreault, Waldman, Alexander & Zhao, 2008; Tanner, Noser, and Langford, 2003; Tanner, Noser, Fuselier & Totaro, 2004a; 2004b; Tanner, Noser, Totaro & Birch, 2006; Tanner et al., 2009). Perception and performance results are mixed.

According to theory, the more someone is exposed to and uses a particular method or model, the more adept they become in using it (Dobbs, Waid & del Carmen, 2009; Tanner et al., 2003; Tekinarslan, 2011). Several studies demonstrated differences between students who have taken online courses and those who have not (Dobbs et al., 2009; Tanner et al., 2003). Students not taking online courses perceive that faculty have low expectations of online students, contrary to online students that perceive instructors as having higher expectations (Dobbs et al., 2009). In a study of business students – regardless of whether the student took or did not take online courses, students favored FTF courses; however, most online respondents only took one course (Fish & Snodgrass, 2014). As students take more courses, studies evaluating student's perceptions of online courses demonstrate an increasing acceptance of online as being equal to or better than FTF (Dobbs et al., 2009; Fish & Snodgrass, 2014; Mortagy & Boghikian-Whitby, 2010; Perreault et al., 2008; Tanner et al., 2003). Using the same survey instrument as this study, results indicated that as business students took more courses, their perceptions of the online environment improved, and their perception that online courses were more difficult than traditional classes increased (Fish & Snodgrass, 2014). Therefore as shown in many studies (Dobbs et al., 2009; Mortagy & Boghikian-Whitby, 2010; Perreault et al., 2008), as students experience in the online environment increases *over time*, their perceptions improve with increasing exposure to the online environment. Prior research indicates that students need to complete at least 5 online courses before they perceive that they learn more in the online environment than FTF (Dobbs et al., 2009). A literature search revealed that no research to date has evaluated the change in business student perceptions of the online environment *over a single online course*. *Do students' preconceived perceptions prior to a course continue throughout the course, or do they change significantly? Does their prior experience in online learning impact upon their perceptions?* These questions are the focus of this study.

Two streams of research in the online environment exist: student characteristics (such as motivation, discipline and independence) and program characteristics (such as academic rigor or the ease of cheating) (Fish & Snodgrass, 2014). A survey instrument that includes these two streams of research, developed and used in prior studies, will be used in this study (Fish & Snodgrass, 2014, 2015). The previous studies compared undergraduate, graduate students and international students who experienced online education versus those who did not. The results of previous studies are briefly reviewed here.

Student Characteristics. In the online environment, student emotions impact upon a student's ability to learn, and student perceptions should be realistic (Tanner et al., 2009). In FTF classrooms, instructors recognize, react and modify their lessons based upon real-time feedback they receive from the students (Reilly, Gallager-Lepak, & Killion, 2012); however, this feedback does not exist in today's online environment. Studies that analyze online and FTF student perceptions are mixed, and results often conflict with other studies. Student characteristics that may impact upon a student's ability to learn include student motivation, discipline, self-directed learning environment, independence, time and cost investment, and preference and happiness in the online or FTF learning environment. Also, whether a student feels the environment – online or FTF – is appropriate may impact upon his ability to learn.

Motivation, Discipline, Self-directed, Independence, and Happiness. In general, when students find the material to be relevant and the content interests them, they are more motivated (Adler, Milne & Stablein, 2001). With regard to student motivation and learning environment, results are mixed. Some studies indicate that the online environment increases critical thinking and work motivation (Larson & Sung, 2009), while other studies indicate that the online environment offers low motivation for students to learn (Fish & Snodgrass, 2014; Maltby & Whittle, 2000) with retention issues (Abouchedid & Eid, 2004) and low student satisfaction (Muilenburg & Berge, 2005). In our prior study, both online students and FTF students (who never experienced online) indicated that they were more motivated in the FTF environment (Fish & Snodgrass, 2014).

In order to be successful, online students should be disciplined (Schott et al., 2003) as students that are not self-motivated and committed will not be happy in the online learning environment (Rivera & Rice, 2002). In our prior study, online learners and FTF learners felt the discipline required in their group is 'equal to or more' than the other instructional method (Fish & Snodgrass, 2014). Also, once online students experience the online environment, they are 'okay' with it but do not appear to be as happy as those who are entrenched in the traditional FTF classroom. Online learning requires self-directed learning and autonomy, but self-discipline and motivation are also required to complete the course (Gifford, 1998; Kearsley, 2002). In our prior study, both FTF and online students felt the independent learning was about the same for both learning environments, but slightly favored their own learning environment (Fish & Snodgrass, 2014). Our previous results found that online students prefer the discipline and independence of online learning over FTF classes, but are indifferent to the self-directed online learning environment (Fish & Snodgrass, 2014). Some students always prefer to work independently (Hiltz & Turoff, 2005). Cultures may regard independent versus collective work differently; for example, U.S. students prefer independent work, while their Chinese counterparts prefer group work (Lin. Lee & Magjuka, 2010).

Time Investment and Cost Investment. Results regarding time and cost investment in the online environment are mixed as some studies indicate that students perceive online learning to be more time consuming (Dobbs et al., 2009; Gifford, 1998; Perreault et al., 2008), indicate student indifference (Fish & Snodgrass, 2014), or report FTF students studying more than their online counterparts (Horspool & Lange, 2012). Good time management skills are critical in online learning (Cheung & Kan, 2002). Student beliefs regarding online education may also include the educational benefit and monetary cost associated with a course (Chawla & Joshi, 2012). Traditional FTF students felt the value from an online course would be less than FTF (Chawla & Joshi, 2012); however, in our prior study, online students were indifferent to cost investment (Fish & Snodgrass, 2014).

Preference and Appropriateness. In our prior study, while online and FTF students both felt online courses are appropriate at the university, both groups preferred FTF classes (Fish & Snodgrass, 2014).

Program Characteristics. Students perceptions may be shaped by online and FTF program characteristics, such as course difficulty, cheating, schedule flexibility, student interaction and instructor interaction as well as the various technologies and activities used in the course. Whether students are properly prepared through formal training is another factor that may impact upon student perceptions. Research on student perceptions on program characteristic also produced mixed results as outlined below.

*Difficulty***.** Student perceptions on course difficulty vary as some studies indicate FTF courses are easier than online (Dobbs et al, 2009), while others indicate online courses are easier than FTF (Armstrong, 2011). In our prior study, students indicated a dislike towards online learning (versus FTF) for difficulty (Fish & Snodgrass, 2014).

*Schedule Flexibility***.** A common reason online students choose to take online courses is flexibility and convenience (Chawla & Joshi, 2012; Grandon, Alshare, & Kwun, 2005; Horspool & Lange, 2012; Perreault et al., 2008), the

ability to self-control the learning environment (Armstrong, 2011), avoiding a commute to campus, and work demands (Horspool & Lange, 2012). In our prior study, online students preferred the schedule flexibility afforded through online classes, while traditional FTF students did not perceive the schedule flexibility benefit associated with online classes (Fish & Snodgrass, 2014).

Academic Integrity - Cheating. Rumors surrounding online cheating abound. Student perceptions on cheating indicate that it is easier to cheat in the online than FTF environment (Lanier, 2006; Fish & Snodgrass, 2014).

*Student Interaction and Instructor Interaction***.** With respect to 'people' interaction, results are mixed. Some studies indicate online courses enhance learner participation and interactivity (Maeroff, 2004), and others highlight a general feeling of 'disconnect' due to the lack of FTF interactions (Stodel, Thompson & MacDonald, 2006) or student distress (Hara & Kling, 2003). When online students do not perceive that they are part of the 'group', they tend to be disgruntled and report inadequate student communication (Horspool & Lange, 2012), a lack of student interaction, and a general unwillingness of other online learners to participate in group assignments (Maeroff, 2004). Studies offer mixed results as some indicate that online students like the online interaction with other students more (Wang & Morgan, 2008) while others indicate they like it less (Horspool and Lange, 2012) than FTF.

When students perceive faculty as missing, they perceived the course quality as poor and vice versa (Armstrong, 2011). With respect to instructor interaction, mixed results exist again. Some studies indicate that online interaction with the instructor is weaker (Wang & Morgan, 2008), indifferent (Horspool & Lange, 2012) or equal or even more positive than FTF (Boyd, 2008). In our prior study, online and FTF learners preferred the student and instructor interaction in the FTF classroom over online (Fish & Snodgrass, 2014).

Course Activities and Prior Online Training. Online education requires additional student and instructor skills (Tekinarslan, 2011), but it offers greater access to additional learning resources (Sener & Stover, 2000). For the most part, online and FTF students appear technically well-equipped and comfortable in taking online courses as few report significant communication issues (Horspool & Lange, 2012). Early research favored training or tutorials for online students prior to online enrollment (Perreault, Waldman, Alexander, & Zhao, 2002). Recent research indicates that students without online training felt they were adequately prepared (Perreault et al., 2008). In our prior study, over 90% of the students who completed online courses did not complete any formal online training prior to taking the online course (Fish & Snodgrass, 2014).

As for valuable online activities, students perceived video modules, quizzes and the textbook as valuable to the learning environment regardless of whether the course was online or FTF (Horspool & Lange, 2012). Other researchers indicated that students found the most used and valued online activities include lecture/lab notes, unit learning resources and information, online discussions, contacting lecturers/tutors and assignments (Palmer & Holt, 2010). Students perceived receiving assignment feedback from the instructor and reviewing unit progress as important to online learning (Palmer & Holt, 2010).

Literary Conclusions for Study. While not comprehensive, this literature review clearly indicates that ambiguity exists in the debate between online and FTF education. Research also indicates that a student's experience with online education changes over time, with a particular focus on 5 online courses as a critical point in perceptual development. This research seeks to explore the time frame associated with perceptual changes by examining changes over one semester at a mid-sized, Jesuit, Catholic, business school with a focus on business.

METHOD

At an AACSB accredited, Jesuit, Catholic University in the northeast, students in an online graduate business course in global supply chain management participated in pre-course and post-course surveys regarding their perceptions of online versus FTF education. Graduate students completed the pre-course survey over the weekend prior to the start of class, while they completed the post-course survey over exam week. Sixteen students completed the course; however, only 13 students completed both the pre-course and post-course surveys. (Note, while all students completed the pre-course survey, to encourage participation in the post-course survey, extra credit towards a term paper was promised for 90% or more participation. Unfortunately, the students failed to reach this level of participation.)

The online course was the first online course taught by the instructor, who taught for 22 years prior at the institution in FTF classes and the FTF version of the online course 11 times prior. The instructor completed the university's online training course in preparation for the course. The student weekly activities included completing the required textbook readings in conjunction with a weekly handout highlighting critical material, answering study group questions (worth 25% of student's final grade) and individual questions, and completing a weekly quiz (worth 20% of student's final grade and administered through the Desire2Learn course management system). Additional readings and/or Executive Briefings with additional individual and study group questions were also included in the course as material warranted. All weekly material, except the quiz, was available on Sunday, 12:00 a.m. The study group questions were due on Wednesday evenings at 11:59 p.m., and general instructor feedback on the questions appeared at 6:00 a.m. on Thursday mornings. The groups consisting of 4 students each were assigned and rotated four times throughout the semester. At the end of each rotation, information on the group performance was gathered and grade adjustments could be made. (The instructor never needed to address group issues as no major problems were indicated.) The weekly quiz became available at 12:00 p.m. on Thursday and was due by Saturday, 11:59 p.m. Quizzes, which were timed, consisted of multiple choice questions, mapping and short answer questions, and the lowest 2 scores (out of the 15 were) dropped. In addition to the weekly activities, 5 assignments (worth 30% of student's final grade) were due throughout the semester. Students also completed a term paper (worth 25% of the student's final grade) on a student-proposed, instructor-approved topic.

Based upon prior research as noted above, the instructor administered a survey similar to other studies (Fish & Snodgrass, 2014, 2015) through the University course management software – Desire2Learn. The pre- and post-perception surveys questions included questions on motivation, discipline, self-directed, independent, time and cost investment, student and instructor interaction, difficulty, cheating, schedule flexibility, course activity preference, preference for online versus FTF education, happiness, and the appropriateness of online education at the university (See Appendix). In the pre-course survey, students answered additional questions on whether they had taken a prior FTF course with the instructor, the number of online courses taken prior not at the university, the number of online courses taken prior at the university, and whether they had taken an online preparation course at all, through the university, textbook publisher or other. In addition to specific questions regarding the handouts, quizzes, additional readings, Executive Briefings, assignments, study group questions, the individual term paper, textbook, final grades, office hours, and other potential activity changes to the course, students were surveyed on the number of hours they spent working on course material each week (excluding two very intense weeks noted prior to the course by the instructor). Survey information was codified as noted in parentheses in the Appendix, and the data was entered into an EXCEL spreadsheet for analysis.

ANALYSIS

The pre-course survey indicated that out of the 16 students that took the course only 3 had taken a course prior with the instructor. In the pre-course survey, five students indicated that they never took an online course, 1 student took 1 online course, 3 students took 2 online courses, 1 student took 4 online courses, 2 students took 5 online courses and 1 student took 6 online courses. The pre-course survey indicated that students took an average of 2.15 online courses (σ = 2.34). Unfortunately, in the pre-course survey only 3 students commented on student interaction, instructor interaction and activities that increased or decreased their understanding of course material so a comparison between pre- and post-perceptions on these parameters could not be made.

As shown in Table 1, results (student t-test, one-tail, pairwise) indicate that students perceptions remained the same for all parameters except motivation (p=.04), difficulty (p=.05) and cheating (p=.03). A slight change in perception for discipline required was also noted (p=.07). Students indicated that they were indifferent as to motivation between the two environments prior to taking the course; however, following the course, they indicated that they were less motivated in the online environment. With respect to difficulty, students felt that the online environment was more difficult – and perceived it to be significantly more difficult following the course. Prior to taking the course, students perceived that the online environment would be easier to cheat in; however, following the course, they were relatively indifferent. Similarly, prior to the course, graduate students perceived the online environment to require more discipline; however they were more indifferent to the discipline required following course completion. With respect to enjoying the self-directed online environment, students tend to dislike it. However, they tend to enjoy the independence associated with online learning slightly more than the FTF classroom. Graduate students perceive the time investment to be greater online than FTF, which is interesting given that students only spent an average of 5.82 hours per week (σ = 2.77 hours) on course material. In general, students perceived the cost

investment to be slightly less in the online environment. They also noted the schedule flexibility associated with online courses. In general, students were 'okay' to 'slightly happy' with the online course.

Table 1. Student Pre- and Post-Course Perceptions

Perception	Pre-Course		Post-Course		T-Test
	Average	Standard Deviation	Average	Standard Deviation	
Motivation	3.00	.41	2.54	.78	.04 *
Discipline	3.85	.69	3.46	.78	.07 **
Self-directed	2.64	1.21	2.69	1.44	.39
Independence	3.23	.93	3.31	1.38	.41
Time Investment	3.46	.88	3.85	1.07	.13
Cost Investment	2.62	.65	2.85	1.07	.21
Difficulty	3.23	.73	3.54	.97	.05 *
Cheating	2.54	.66	2.92	.28	.03 *
Schedule Flexibility	4.17	.58	4.00	1.15	.21
Preference	1.77	.73	1.69	.95	.34
Happiness	3.31	.63	3.23	1.17	.39
Appropriateness	1.54	.66	1.46	.66	.36

* $p \leq .05$ ** $p \leq .1$

Five students never changed their mind over the course and indicated that they would've preferred to take the class as a FTF class. Pre- and post-course completion, two students desired an online course, and one student was indifferent. Three students began the course as indifferent between the two environments, but by course completion indicated that they would prefer a FTF course. Two students began the course as indifferent, but by course completion they indicated that preferred the online environment. Before and after course completion, students were divided between online courses being inappropriate and undecided as to whether they were appropriate for the university.

As noted above, student perceptional changes with respect to student and instructor interaction could not be analyzed as too many students did not complete the pre-course survey for these items. Interestingly, post-course completion results indicate that students were relatively indifferent to student interaction ($\mu = 2.92$, $\sigma = .76$), while they tended to dislike the instructor interaction in the online environment ($\mu = 2.69$, $\sigma = .85$). Student-to-student interaction consisted of weekly completion of the study group questions instead of discussion board posts. As noted previously, no online classes were held, and instructor-student interaction consisted of online office hours and email. Interestingly, only one student ever attended the online office hours.

After course completion, 5 students indicated that the discussion board/study groups (5) or homework assignments (3) contributed the most to their understanding of the material. The majority of graduate students (9) indicated that they would not remove any activities from the current course offering, while 3 students indicated that they felt the additional readings decreased their understanding of course material.

Online Perceptual Differences with Online Experience. Since only 16 students took the course, subdividing and statistically comparing student perceptions by the number of online courses that students have taken is not statistically acceptable. While the numbers are small, comparing the perceptions of students without prior online experience ('novices'; 5) to those with online experience ('experience', 8) reveals very little difference in perceptions between the two groups as shown in Table 2. As expected, the number of online courses are statistically different between the two groups (p=.00). The only perception that was statistically different between the two groups was post-course student interaction (p=.03). Novices liked the student interaction in the online environment more than the FTF environment ($\mu = 3.4$, $\sigma = .55$) more than their more experienced peers ($\mu = 2.63$, $\sigma = .74$). Slightly significant differences were noted for the pre-course perception regarding self-directed (p=.10) and happiness (p=.09), and post-course average number of hours invested in the course (p=.10). Prior to the course, novices noted that they disliked the self-directed nature of the online environment more than the FTF environment ($\mu = 2.40$, $\sigma = 1.14$) slightly more than their experienced peers who were more indifferent ($\mu = 2.88$, $\sigma = 1.64$). Prior to taking the courses, novices were slightly more positive with respect to expected happiness in the online environment ($\mu = 3.60$, $\sigma = .55$) than their experienced peers ($\mu = 3.13$, $\sigma = .64$). After completing the course, novices

reported spending slightly fewer hours (μ= 4.5, σ =1.32) than their experienced peers (μ= 6.31, σ =3.07). In general, very little difference in student perceptions existed between the novices and those who had prior online experience.

Table 2. T-test Comparison of Students without versus Students with Prior Online Experience

Perception	Pre-course	Post-course
Motivation	.5	.33
Discipline	.15	.30
Self-directed	.10 **	.28
Independence	.11	.41
Time Investment	.41	.45
Cost Investment	.47	.44
Student Interaction	-	.03 *
Instructor Interaction	-	.18
Difficulty	.45	.22
Cheating	.11	.18
Schedule Flexibility	.23	.22
Preference	.19	.20
Happiness	.09 **	.31
Appropriateness	.39	.31
Average Number of Hours Invested in Course	-	.10 **
Total Online Courses	-	.00 *

* $p \leq .05$ ** $p \leq .10$

However, as shown in Table 3, the correlations between student perceptions and self-reported average weekly hours invested in the course yields some interesting results. A moderately negative relationship exists between average hours invested in the course and the self-directed learning environment, independence, preference and happiness. After the course, students continued to demonstrate this moderately negative relationship with time investment and cheating, but had a moderate positive relationship with time and cost investment in the online environment. Essentially, as students invested more time into the course, they enjoyed the self-directed, independent learning environment online less, and they preferred the FTF classroom. With respect to cheating, as graduate students invested more time into the course, they felt it was significantly easier to cheat online!

Table 3. Correlations between Perception and Average Number of Hours Invested in Course

Perception	Average Weekly Hours Invested in Course	
	Pre-course	Post-course
Motivation	.08	-.37
Discipline	.20	-.08
Self-directed	-.58	-.38
Independence	-.58	-.60
Time Investment	-.16	.47
Cost Investment	.12	.76
Difficulty	-.20	-.14
Cheating	-.36	-.80
Schedule Flexibility	.02	.06
Preference	-.59	-.38
Happiness	-.58	-.33
Appropriateness	.43	.08

DISCUSSION

The key focus of this study is to evaluate graduate student perceptual changes over a semester online course at a business school with a focus on teaching. Students' preconceived perceptions did not change except on motivation,

difficulty and cheating. The instructor took great care in ensuring that the online course mirrored the difficulty and demands of prior FTF class offerings. There was never a 'break' in the semester as students were expected to complete the required work regardless of holidays. Perhaps as the semester wore on, graduate students became less motivated to the work alone. Since the majority of the work is done alone, they may have realized that the difficulties of working alone to 'figure it out' versus being in a traditional classroom. With regard to the timed quizzes, students may have realized that they couldn't just 'look up the answer' but actually had to learn the material similar to a FTF class. Similar to other studies (Chawla & Joshi, 2012; Fish & Snodgrass, 2014; Grandon et al., 2005; Horspool & Lange, 2012; Perreault et al., 2008), graduate students overwhelming favored online education for the schedule flexibility that online offers. Ironically, the results indicated that graduate students felt their time investment was significantly greater online than FTF, but they only reported spending an average of 5.82 hours on the course! A traditional FTF class has a 2.75 hour class associated with it, along with readings, studying, problem solving and homework to complete, which probably takes the average student longer than 6 hours per week. Perhaps since the online student is 'alone' the majority of time, they feel the time investment more than in a FTF class.

Significant differences between novices and more experienced online graduate students did not exist with the exception of post-course student interaction. Novices liked the student interaction in the online environment significantly more than their more experienced peers. Since novices had not experienced this constant student-to-student interaction in the FTF classroom, they enjoyed it more than their more experienced counterparts who had this experience in the past. Perhaps the 'novelty' wore off for the experienced online students. However, one should note that the majority of students who participated in the study had less than 2 online courses prior, and only 3 students took 5 or more courses prior. In keeping with prior results (Dobbs et al., 2009; Fish & Snodgrass, 2014), it's not surprising to find that the graduate students in this study tend to favor FTF education.

Courses given to instructors to assist them with learning how to teach online often indicate that students will be similarly prepared through training. However, in both this study (where only one student had formal training) and a prior study (where over 90% of students out of 111 indicated no formal training (Fish & Snodgrass, 2014)), the majority of students did not take any online training courses. Similarly, other research indicates that students without online training felt they were adequately prepared (Perreault et al., 2008). While exposing a student to tools and techniques, online training also impacts upon a student's perceptions and expectations. So, while students felt that they were adequately prepared to participate in the online course, it is interesting to note that their perceptions still favored the FTF classroom. If potential online students are required to take online preparatory courses, perhaps their expectations will be more realistic.

Interestingly, as the hours students invested in the course increased, their preference for the self-directed, independence, and happiness in the online environment decreased. Perhaps, the more time they invested *alone*, the more they longed for the more personal interaction in a FTF classroom. As graduate students invested more time into the course, they felt it was significantly easier to cheat online. Perhaps as students invested more time into the online course, they find and possibly develop methods to cheat.

The post-course survey indicates that graduate students were generally happy with the course structure as most students felt all of the activities added to their learning experience. Interestingly, most graduate students favored study groups – with personal interaction – and assignments – done individually – as adding the most to their learning experience. Obviously, students recognized the importance of learning from others, but, they also value individual assignments.

A few limitations in this study exist. First and most importantly, the number of students that participated in the class was relatively small, with only 13 completing both the pre- and post-course surveys. Hopefully, future offerings of the class will include more data. A more robust sample may be subdivided into relevant subgroups and offer more complex statistical analysis. Unfortunately, since online courses are limited to 20 students at the University, the sample size by class will remain small unless additional sections are offered, which may add complexity due to section differences. The results and discussion here should be viewed as a 'preliminary' study but should offer insight for other instructors and researchers. Secondly and unfortunately, since few students completed the pre-course survey questions regarding student and instructor interaction and activity preferences, the study was unable to analyze these perceptual changes. Hopefully, future studies will be able to gather this information.

Similar to our prior study (Fish & Snodgrass, 2014), graduate students perceptions tended to favor FTF education in both the pre-course and post-course survey. Assuming as administrators do that online education is equivalent to

FTF (Allen & Seamen, 2013), then students should be indifferent to all of the factors surveyed. This study and others indicate that this is not the case. Clearly, the results indicate that students with relatively little exposure to the online environment (less than 5 online courses) – and no formal online training - prefer FTF courses at the teaching university. The preliminary results comparing pre-course and post-course perceptions indicate that students retain their perceptions that they have of online education over a course, and their preconceived perceptions did not change.

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Appendix A Student Perceptions Survey

This is a core area and concentration course. How much of the MBA program have you completed to date?
Are you currently working a full or part-time job, and if so, where and what is your position?
Some students did their undergraduate degrees here at the university or took a foundation level course with me. Did you take a course with me in the past? Yes (1) No (0)
How many online courses have you taken before (not including the university)?
How many online courses have you taken before at the university?
Prior to taking an online course, did you take a course to prepare you for the online environment? I didn't take a preparatory course. (1) I participated in the university's online training. (2) I participated in a book publisher's online training. (3) I used alternative tools to prepare to learn online. (4)

Pre-Course and Post-Course Perception Questions

Online Format: This was the first time this course will be offered online (instead of in the Face-to-Face classroom). With this in mind, I would like to understand your expectations in the online environment more. Please complete the following statements:
I am _____ **motivated** in online courses than face-to-face courses. (1) Significantly Less (2) Less (3) Equally (4) More (5) Significantly More
I find the **discipline** required in taking online courses to be ____ than in face-to-face courses. (1) Significantly Less (2) Less (3) Equally (4) More (5) Significantly More
I enjoy the **self-directed** online learning environment__than the interaction in face-to-face courses. (1) Significantly Less (2) Less (3) Equally (4) More (5) Significantly More
I enjoy the **independence** associated with the online learning environment____than the interaction in face-to-face courses. (1) Significantly Less (2) Less (3) Equally (4) More (5) Significantly More
I find online courses require____**time investment** in the course than face-to-face courses. (1) Significantly Less (2) Less (3) Equally (4) More (5) Significantly More
I find online courses **total costs** are ____than face-to-face courses. (1) Significantly Less (2) Less (3) Equally (4) More (5) Significantly More
I ____the **interaction with other students** in the online environment compared to the face-to-face course environment. (1) Significantly Dislike (2) Dislike (3) Equate(4) Like (5) Significantly Like
I ____the **interaction with the instructor** in the online environment compared to the face-to-face course

environment. (1) Significantly Dislike (2) Dislike (3) Equate (4) Like (5) Significantly Like
I perceive online courses to be_____in **difficulty** than face-to-face courses. (1) Significantly Easier (2) Easier (3) The Same Difficulty (4) Harder (5) Significantly Harder
I find its' _____to **cheat** in the online environment than in face-to-face courses. (1) Significantly Easier (2) Easier (3) The Same (4) Harder (5) Significantly Harder
I enjoy the **schedule flexibility** associated with the online learning environment_____than the interaction in face-to-face courses. (1) Significantly Less (2) Less (3) Equally (4) More (5) Significantly More
In the online environment, I feel the most critical activity that increases my understanding of the course material is: (1) Discussion boards/Study Groups (2) In-class sessions (3) Additional Readings (4) Homework /Assignments (5) Videos / Executive Briefings (6) Instructor office hours (7) Instructor chat / email (8) Other students (9) Problem Scaffolding & Hints (10) None of the activities helped at all.
In the online environment, I feel the most critical activity that decreases my understanding of the course material is: (1) Discussion boards/Study Groups (2) In-class sessions (3) Additional Readings (4) Homework /Assignments (5) Videos / Executive Briefings (6) Instructor office hours (7) Instructor chat / email (8) Other students (9) Problem Scaffolding & Hints (10) None of the activities helped at all.
Would you prefer to take the class in a traditional face-to-face environment? Yes (1) Undecided(2) No (3)
I am _____with the online course environment for learning. (1) Not very happy (2) Not happy (3) Okay (4) Happy (5) Very happy
Given this institution, do you think online courses are appropriate? Yes (1) Undecided(2) No (3)
The course is typically offered in a Face-to-Face environment. Why did you choose to take the course online?

Additional Post-Survey Questions:

In my opening comments about the course, I indicated that weeks 2 and 3 would be very intense; however, the other weeks would be more manageable. In general, how many hours per week (excluding weeks 2 and 3) did you spend on course material?

Developing the Personal Ethics Code: A Key Element of an Effective Business Ethics Course

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ABSTRACT

Since the early 1990's when corporate misdeeds became the norm versus the exception, the Association to Advance Collegiate Schools of Business (AACSB), along with its member schools, have struggled with the best way to produce ethical business school graduates - both at the undergraduate and graduate level. The AACSB standards specifically avoid ''particular courses or treatments.'' Instead, the language of the AACSB states that ''schools should assume great flexibility in fashioning curricula to meet their missions and to fit with the specific circumstances of particular programs,'' and each school is free to determine how to best integrate teaching business ethics to ''meet the needs of the mission of the school and the learning goals for each degree program.'' (2012a, b: Ethics/Sustainability Resource Center). Introduced in the paper is a project titled "Personal Ethics Code" which serves to assist students to understand their own values systems, to achieve self-awareness about decision making, and ascertain their ethical priorities, thus, allowing them to become skilled ethical decision makers.

Keywords: business ethics; ethics education; ethics codes

INTRODUCTION

Since the early 1990's when corporate misdeeds became the norm versus the exception, the Association to Advance Collegiate Schools of Business (AACSB), along with its member schools, have struggled with the best way to produce ethical business school graduates - both at the undergraduate and graduate level. The AACSB standards specifically avoid ''particular courses or treatments.'' Instead, the language of the AACSB states that ''schools should assume great flexibility in fashioning curricula to meet their missions and to fit with the specific circumstances of particular programs,'' and each school is free to determine how to best integrate teaching business ethics to ''meet the needs of the mission of the school and the learning goals for each degree program.'' (2012a, b: Ethics/Sustainability Resource Center).

Thus, the core tenets of any debate regarding business ethics education is " How best to teach it?" As shown above, AACSB allows its member schools considerable discretion, which leaves the universities with three (3) primary options:

- Option 1: Teach a stand-alone course
- Option 2: Integrate business ethics throughout the curriculum.
- Option 3: A hybrid version of Options 1 and 2.

Thus, universities are left with the decision as to how best to teach ethics to their students. As a Business Ethics professor for 6 years, I am quick to point out that I do not teach ethics. In other words, I do not teach anyone to be ethical in my classes. I do not have that capacity nor do I believe this is an isolated belief amongst ethics professors. As the majority of my classes are filled with students in their twenties, their ethical framework and values are already formed by the time they enter an undergraduate Business Ethics course.

Traditionally, classroom discussions in a business ethics course focus on decision-making and pose the question: ''what is the right thing to do?'' in any given scenario. The students are generally given a multitude of case studies, which poses this question or a variation thereof, and the student's attempt to address it. This question is certainly important but it positions business ethics as an intellectual debate in a vacuum and is relatively easy to answer. It is safe to say that the majority of students would respond in an ethically sound manner in a classroom debate regardless of their values, thus negating the purpose of the debate itself. No undergraduate business student sets out to become Bernie Madoff. The average student can recognize what he or she should do or should have done – ethically speaking. But this does not help the student to become more ethical nor does it, by itself, prepare them to act ethically in their future business careers.

In their 2008 book, *Advancing Business Ethics Education*, Swanson and Dahler-Larsen (2008) identified the importance of understanding one's sense of self, one's self-interests and biases, and one's relationships with others as key elements to achieving self-awareness about decision making. Case studies are good practical tools as is teaching a framework for ethical decision-making but using these tools in isolation does not advance the student from engaging in an intellectual debate to becoming an ethical decision maker. Life rarely presents itself in stark, either-or scenarios with sanitized, tightly-woven case studies. Monday morning quarterbacking of thorny ethical issues are easy and offer minimal challenge to the student.

To advance, students must understand their own value systems. Fink identified in his seminal work, *Creating Significant Learning Experiences for College Classrooms* (2003), that motivating others to understand their own value systems was as an important element in the academic learning process." In Badaracco's 4 year study of "quiet leadership" (1997), he identified that understanding one's own values is critical to prioritizing one's ethical priorities. Fundamentally, individual decision-making is tied to one's normative values (Goodchild, 1986). Recognizing individual values and how one views the world are key factors in determining moral duties (Ravenscroft & Dillard, 2008).

So how does a business ethics course attempt to bring about recognition of one's own values, biases, and their ethical priorities without bringing the Professor's own values into the mix? In an attempt to address this particular problem in a stand-alone Business Ethics course, the method by which undergraduate business ethics students accomplish this is through a semester long project entitled the "Personal Ethics Code." This project is an adaptation of several assignments presented by Hartman in *Decision Making for Personal Integrity and Professional Responsibilities* (2008) and Howard and Korver's *Ethics for the Real World* (2008). The project takes place over a 15-week semester and involves eight (8) separate steps. Each step is clearly defined and the students use earlier steps to build on and respond to later steps. Briefly, the steps are divided as follows:

- Step 1 – Understanding your Ethical Lens
- Step 2 – Goals & Traits
- Step 3 – Norms & Beliefs
- Step 4 – Personal Audit
- Step 5 – Personal Values & Exceptions
- Step 6 - Writing your own Obituary
- Step 7 – Connect & Reflect
- Step 8 – Writing your own Personal Ethics Code

By working through each step in a confidential, non-threatening manner, students are able to focus on their value systems while being challenged to examine their stated values against their everyday life, their career goals, and their life aspirations. Each step is explained in detail below.

DRAFTNG THE PERSONAL ETHICS CODE

The course where the project takes place is Business Ethics, which is a required part of the Core Business Curriculum for undergraduate business majors at the university where I teach. The setting is a public, liberal-arts university of ~6,000 students. Less than 3% of the students who take the course are non-business majors or minors. As a 2000 level course with no pre-requisites, the students range from freshman to 5th year seniors. The average age of the student is twenty (20) years. The Project is assigned in both face-to-face as well as online courses. Each class has approximately forty (40) students. To date, 1500+ students have completed the Project. At semester's end, students are provided a course evaluation where they are asked to evaluate the course as a whole and the Project in more detail.

At the beginning of the semester, the Professor introduces the project through a power point style presentation discussing the need for ethical business leaders and how one's ethical framework is formed and evolves throughout a person's lifetime. The students review various influences on ethical values. First they are shown value systems from religious perspectives (e.g. Ten Commandments, The Quran, The Talmud, Buddhism precepts, and Hinduism). Secondly, they are shown everyday influences from the rich and famous (as positive or negative examples). Lastly, they are shown influences from a University's perspective including their own University's Code which they all

signed and committed to as Freshman along with those of other Universities including military service academies' Honor Codes regarding lying, cheating, and stealing. A brief overview of each step in the Project is discussed.

Between that introduction until the first step is completed, the students are asked to review the documentary *Enron: The Smartest Guys in the Room*. The students complete a Critical Analysis as a written assignment and a class discussion follows. This documentary, for anyone not familiar with it, presents major ethical lapses for a much-admired publicly-traded U.S. company until its bankruptcy in 2001. The students are also provided a digital copy of Enron's 64-page Code of Ethics signed by the CEO, Kenneth Lay, in July 2000 committing Enron and its employees to "conducting the business affairs of the companies in accordance with all applicable laws and in an honest and moral manner." (Enron's Code of Ethics, 2000). The documentary and the Code of Ethics brings the students face to face with failed leadership, governance, and oversight all the while observing how Enron employees at every level engaged in these ethical lapses seemingly without question. This documentary sets the stage for the Personal Ethics Code and for the rest of the semester's work. Following this, the students begin the process of completing the eight (8) Steps. The process for grading is provided later in the paper.

Step One: Understanding your Ethical Lens

Step One titled "Understanding Your Ethical Lens" is a critical analysis of a personality style inventory. Asking the students to take a personality inventory online that are readily available and are free can accomplish this task. After completing this step, the students are asked to analyze their results. In my classes, the students engage in online ethics simulations purchased through the Ethics Game© website as part of the work they do in the course. One aspect of these simulations is a 36-question exercise titled the Ethical Lens Inventory©, which is similar to a personality inventory but gears itself towards responding to ethical dilemmas.

According to the Ethics Game website, the Ethical Lens Inventory is explained to students as follows:

> [W]hy, when so many say they are ethical, do we have so many problems? Is the problem due to human nature—no one can claim to be ethical and there is no hope? Or is there a more basic problem, one of definition? What do we mean by ethics? And exactly how do we determine what actions are—or are not—ethical? The Ethical Lens Inventory (ELI) is a tool to help you answer questions and to help you become more aware about your own values. As you understand what values are important to you, you will discover your preferred approach to solving ethical dilemmas. The ELI will identify your natural ethical home. You will also be given strategies to help you become more ethically mature.

(Baird, 2014, para. 1).

The Inventory results require the student to look at their own ethical lens, their strengths, weaknesses, biases, and potential triggers for unethical behavior. They look at this individually, in a scatter plot per class section, and also through an activity (face-to-face and online) where the students put their results on the board or in an online discussion forum identifying their primary lens, their age, gender, and major. Through this activity we examine how ~forty (40) people could look at the same 36 questions and come up with different results. We examine trends in age, gender, and major. The first inklings of awareness of how people, very similar to themselves, can look at the same issue at the same time and come up with different results, even people who might be their friend or classmate, starts to enter into their consciousness.

To complete the Step, each student submits their individual responses to the questions below prior to the group exercise and discussion. They are asked to answer the same questions presented to them during the Group Activity. The questions are presented below:

1. Do you believe that the Ethical Lens Inventory provides a good depiction of who you are?
2. Did you agree or disagree on the strengths it showed for you? Explain.
3. Did you agree or disagree on the weaknesses of your Preferred Lens? Explain.
4. What is the one item noted in your Preferred Lens that surprised you the most? Provide details.

So the exercise not only brings awareness that given a simple set of questions, multiple ethical perspectives emerge, but also asks them to critically look at what their results mean to them personally. No one lens is considered superior

with each having its own strengths, weaknesses, biases, and potential triggers for unethical behaviour. This is the only step that the students share publicly with other students.

Step 2: Goals & Traits
Step 2 is done after Step 1 is completed. There are usually 10-14 days between each Step's due date. A student may not skip a step and proceed through the process. The project holds little value if steps are skipped as they are meant to build on each other and to force the student to examine their values from a multitude of perspectives and challenges. If a student submits a step after they have skipped one, they are required to complete the skipped step in order to receive a grade for the new step.

Step 2 asks them to identify five (5) things they want to accomplish by the time they retire. It also asks them to identify three (3) traits that will help them accomplish these goals and three (3) traits that might hinder their accomplishments. They are required to explain why they have identified these particular traits and why they believe they will have a positive or negative impact on their goals. This step begins the process of identifying how values and beliefs might impact them long term. This is a difficult process for someone in his or her twenties who rarely considers the long-term implications of their decisions. In this step, they are faced with their recent ethical lens results, which may aid them in identifying the traits that might assist and those that might hinder the accomplishment of their goals, or it may challenge them to acknowledge traits that they other otherwise might not have considered. Even though the Professor is the only one who reviews these Steps, the students regularly report that they are keenly aware of how one response in an earlier step might contradict a following step. The process of developing one's ethical awareness and insight begins.

Step 3: Norms & Beliefs
Step 3 examines the student's perspectives on what he or she believes is absolutely right and absolutely wrong by asking them to list three (3) acts that are always right and three (3) that are always wrong and explain their answers. Students often identify this as their hardest step … at least until Step 6. Some students go very deep into this process identifying such items as abortion and eloquently explaining their rationale. Others cannot identify such an act and identify something much simpler such as "being kind to the elderly." The comments often received from students discuss that every time they came up with something, they would come up with an exception. Exceptions are what they are asked to examine in Step 5. This step starts them down the path of less black and white concrete thinking and more gray area thinking, which tends to be where ethical issues present themselves.

Step 4: Personal Audit
Step 4 asks them to do a simple task – write down everything they do between 7 am and 10:30 pm in a single, 24-hour period, in 30-minute increments, and submit. They are told that this step will be used in a later step. Again, some students go into great detail letting me know about their every moment while others keep it simple.

Student #1 Sample 7:30 am Entry*: "Woke up and got ready for class*."
Student #2 Sample 7:30 am Entry: *"Woke up, let dog out, brought Pop Tart to bed, fell back asleep cuddling said Pop Tart."*

Step 5: Personal Values & Exceptions
Step 5 is a much more involved step with two parts. This step forces the student to specifically identify the basis of their value systems and ethical priorities. Part 1 requires the student to identify, from a list of ~500 values, the ten (10) most important to them and rank them 1 to 10, and to identify the ten (10) least important to them. The set of values can be provided from any source. I have developed my list based on several sources including but not limited to Pavlina's *List of Values* and ThreadsCulture.com. Students report that once they see the list, they feel overwhelmed but feel confident of their two (2) lists once they are done. Two-thirds of students indicate that selecting and ranking the most important values was much harder than selecting the least important values. This step becomes more personal once students reach Step 7.

Part 2 asks them to review three (3) universal beliefs (shown below) and to identify any exceptions they might have. Some exceptions are provided and they are asked to list any additional exceptions they generate themselves. The three (3) universal beliefs are provided below:

- I will not harm.
- I will not deceive/lie.
- I will not steal.

They have the choice to check that they take no exception to the basic tenet (e.g., I will not lie.); or they can choose exceptions that are provided by placing a check mark next to the exception; or they can type in their own. A sample from one student's Part 1 section (Student #3) is shown below:

Lying/Deception
Lying and deceiving are wrong except for:

X *Telling lies to save someone's feelings.*
___ Telling lies to avoid embarrassment
___ Telling lies to avoid punishment
___ Telling lies to get ahead
___ Inflating qualifications on a resume
___ Exaggerating benefits/Hiding deficiencies to a customer
___ Telling lies in negotiations
X *Telling "white" lies*
___ Telling lies to liars
X *Telling lies to children*

Write your own exceptions: "*I only take exception to telling lies to children for those things that are either harmless like Santa Claus and the Tooth Fairy or to not hurt them when I don't have to like not telling them the truth about why their parents are fighting. In high school, I did a lot of babysitting and kids would ask me really personal things about their family all the time. Even if I knew the truth, I usually never told them."*

Step 6: Writing Your Own Obituary
Step 6 asks the students to write their own obituary. Although a morbid subject for most, students are encouraged to use a search engine for examples or look at the obituaries of famous people. This Step is asking them to go from Step 2 identifying what they want to accomplish by retirement to what they want their legacy to be and how do they want to be remembered at the end of their life. Their responses range from the simple to the fantastical. The simple ones show where they married their high school sweetheart, returned to their hometown, and lived the life their parents did – the only difference being the names and dates. The fantastical tends to evince superpowers or marriage to a famous person or something equally far-fetched. If it shows an accomplishment, like curing cancer, then during the grading process the student is challenged how they will accomplish it, if their current path is not working towards that goal.

This is the only step where some students refuse to participate or do so with considerable reservations. If a student expresses a reason, before the due date, as to why they are not comfortable writing their own obituary, they are provided a set of questions to answer instead. In five years, only six (6) students have refused to write their own obituary, but more than one-hundred (both males and females) have expressed their reservations when submitting this step or through the course evaluation.

Step 7: Connect & Reflect
Step 7 asks the students to reflect on the prior six (6) steps. They examine Step 4 to see if the values and the exceptions identified in Step 5 are shown in how they lived their day. They are asked, "Are they living out the values they claim are the most important to them?" They are asked to look at their day in the context of Steps 2 and 6. Is what they are doing now working toward their retirement goals or the legacy they hope to leave? For some, this is a wake-up call. For others it is merely a reminder that who they say they are and who they say they want to be are not currently reflected in their daily lives.

This step allows the students to understand their "own values systems" in a way that case studies and sterile class discussions can never accomplish. It gives them a unique insight in a safe environment to not only evaluate the discrepancies but also to revel in the congruences. The majority of students (~68%) indicate in their responses that they are not satisfied with the results. Students are asked in the same step to explain any discrepancies and how might they be addressed or whether they think they should be addressed. A discrepancy is defined for them as a mismatch between how they spent their day (Step 4), their stated values and exceptions (Step 5), retirement goals (Step 2), and their legacy (Step 6).

Step 8: Writing Your Own Personal Ethics Code

Step 8 is the final step where the students actually write their own Personal Ethics Code. They are asked to examine each prior step to develop their Code. They are provided samples from prior students. They are provided my Personal Ethics Code developed during a high school assignment and also one I use currently. This demonstrates to them that their Ethical Code may and often will evolve over time. The assignment asks them to develop a minimum of ten (10) statements with an example being, "I will not lie except to children." It is explained to them in the context of Enron's 64-page Code of Ethics that longer is not necessarily better for businesses or for individuals and that shorter, simpler Codes are more realistic and more manageable.

The students are warned against a Code filled with positive statements such as " I will cure world hunger." It is explained to them that this is a never-ending job that knows no bounds. They are warned against prudential statements like "I will respect others." It is right to "respect others" but the standard itself provides ambiguous guidance. They are encouraged to make their Code practical and to test it for reciprocity (e.g., Would I want other people applying the same rule to me?) and universality (e.g. Would I want everyone to follow this?).

Some students approach this step as they do all assignments, "What is the minimum I can do to get the grade I want?" The majority, averaging ~77% in the past 5 years, appear to take the assignment seriously. This is demonstrated by the Codes they submit and their comments regarding the assignment in Course Evaluations and Reflections.

In Howard and Korver's book, *Ethics for the Real World*, the authors state:

> With an ethical code in hand, we prime ourselves for dealing with difficult daily challenges. Without a code, we find it too easy to overlook, sweep aside, put behind us, and "let go" of ethical mistakes. With a code we have a tool to act more quickly and without remorse. Our code helps us to remain true to ourselves as we face life's most predictable challenges.

(Howard, Korver, 2008, p. 96).

GRADING

The Personal Ethics Code is graded and counts for 15% of their overall grade. Each Step is graded separately. Based on the time for completion and complexity of the assignment, points are divided amongst the steps as follows:

Step	Title	Points
1	Understanding your Ethical Lens	25
2	Goals & Traits	25
3	Norms & Beliefs	25
4	Personal Audit	50
5	Values & Exceptions	50
6	Writing Your Own Obituary	50
7	Connect & Reflect	25
8	Writing your own Personal Ethics Code	100
	TOTAL	350

As each step is highly subjective, students are not graded on content per se which means they are not graded on what they reveal in each step. Each step, except for Step 4[1] is evaluated in the following manner:

- Completion of requested tasks 40%
- Spelling, grammar, punctuation, usage, mechanics 10%
- Detail and level of analysis 50%

[1] Step 4 is evaluated by the first two items only.

In the "detail and level of analysis" the intent is to determine if the student is actually attempting to address the task given or just doing the minimum. Although this is also subjective, the tasks are asking the students to perform according to Bloom's Revised Taxonomy at the level of evaluate and analyze not at the understanding level. (Revised Bloom's Taxonomy, 2001). For example, the difference between a student that explains why an item is absolutely wrong in Step 3 and one who is just doing the minimum is evident as shown below.

Student #4 Sample Entry (Step 3): *"I believe that using a computer for personal reasons during work is always wrong because you are being paid to do the work of your employer not your personal stuff. It's the same as stealing from your employer."*

Student #5 Sample Entry (Step 3): *"The reason I think this is absolutely wrong is because people get pissed if you do it."*

ADDITIONAL SUPPORTING ASSIGNMENTS

During the course of the semester, students are also introduced to an Ethical Decision Making framework and are shown how to apply this framework to multiple ethical dilemmas. These exercises are performed first in a large group and then in small group and individual settings and takes what the students are learning about their own value systems and ethical awareness to determine their ethical priorities. In grading these exercises and also in the debriefings following, students demonstrate that they are keenly aware of their own ethical lens perspective, that others may not share their perspective, and of how to ascertain their ethical priorities while making key business decisions. Their responses in the assignments and comments foloowing often include information drawn from the steps completed in their Personal Ethics Code.

SUMMARY

The Personal Ethics Code project can be accomplished alongside other traditional course activities like simulations, ethical decision making exercises as described above, and discussion of case studies. The development of the Personal Ethics Code, however, provides something much greater than the traditional Business Ethics course assignments.

In the voluntary Course Evaluations, students are asked the following questions:

1. Check the activity or exercise in which you gained the most knowledge relevant to the Course (out of 10 activities/exercises listed).
2. Describe the activity/exercise and/or part of the course that you believe best prepares you for the real world and explain why.

In the past five (5) years, 1310 students completed the Personal Ethics Code (PEC) project and completed their Course Evaluations out of 1500+ who have taken the course. The following represents the results for the above two (2) questions.[2]

Question #	# of Respondents out of 1310	% Selected the PEC
1	1035	79%
2	878	67%

Provided below are samples of students' responses to Question #2. These represent the general consensus towards the course and the Personal Ethics Code.

> Student #6 Response to Q#2: *"College is full of courses that have no relevance to the real world even in my major courses. Even though I did not look forward to this course, the PEC made it all worthwhile and helped prepare me to make good decisions even the hard ones."*

[2] Responses were only calculated from students that completed all eight (8) Steps and the Course Evaluation.

Student #7 Response to Q#2*: "Business Ethics was the course that forced me to really look at who I am, what I stand for, and practice good decision-making. It's the most practical course offered at GC and I will always think back to my PEC when I'm faced with ethical decisions."*

Student #8 Response to Q#2: *"The PEC has been the most valuable work I have done in college. Every student even non-business majors should be required to do a PEC and take Business Ethics."*

Student #9 Response to Q#2: *"I took Business Ethics online and thought it would be super easy and also useless in the real world. I was totally wrong. This course changed my whole way of thinking. From the Enron movie to the PEC, I was constantly challenged to look at my values, apply them in real world situations, and then analyze what I did afterwards. It was an amazing experience. This is what I was told college would be like. Finally, I had a course that really showed me. I have never given any college assignment to my parents. I gave them a copy of my PEC."*

As shown in the evaluation results and the sample responses provided, it is clear that the Personal Ethics Code provides the students with a recognition and awareness of their values, biases, and ethical priorities in the context of a Business Ethics course because they are not just engaged in isolated intellectual exercises. It also provides them with a practical tool to use throughout their life "to be an ethical decision maker." And is this not what we are trying to accomplish in our Business Ethics courses?

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The Use of Formal Discussant Teams to Enhance Classroom Discussion of Assigned Case Studies

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ABSTRACT

Problem-based learning, which includes the use of cases, simulations, and games in the classroom, has long been considered a useful and effective technique. According to McKeachie (2002), "problem-based education is based upon assumptions that human beings evolved as individuals who are motivated to solve problems, and that problem solvers will seek and learn whatever knowledge is needed for successful problem solving." However, a critical key to the success of problem-based learning is student participation. As educators, we know that the culture and make-up of each of our classes can vary widely and, thus, while there might be rich and informative discussions in one class, the next class might be quite the opposite and the instructor literally has to "pull teeth" to engender much discussion at all.

Reasons why students might choose not to participate include, but are not limited to, fear of criticism or of looking stupid, habits of passivity in the classroom, being unprepared, and failure to see the value of discussion. In the Problems in Managerial Finance course (a case-based class) one of the authors has been experimenting with the use of official "discussant" teams (analogous to the use of discussants at professional meetings) to enhance and ensure valuable discussion for all cases.

Keywords: problem-based learning, class discussion, case studies, discussant teams

INTRODUCTION

Educators by nature enjoy talking and place a high value on intelligent discourse that broadens the educational experience of their students in the classroom. Class discussions help accomplish at least three important objectives: 1) problem solving, 2) integrating course content with personal experience, and 3) exploring the basis for feelings and opinions about particular topics or actions (Kramer & Korn, 1996). One might add to this list the importance of gaining self-confidence by speaking in front of others and learning to frame arguments in a way to make them both convincing and compelling.

In a case-based course class discussion is crucial to the learning environment. Case classes are intrinsically heuristic in nature, that is, the learning is largely self-directed and the case discussions "depend upon the active, effective participation of the students" (Shapiro, 2014, p. 2). The belief that each student's learning is best facilitated by regularly participating in discussions is widely held among instructors of such courses. Thus, getting students to take ownership of the discussions is a paramount goal of instructors.

In one study students reported that they associate several important benefits to a well-run class discussion. These include: 1) making learning more active, 2) gaining deeper understanding of the material, and 3) promoting the importance of thinking about and taking a perspective (Roehling, Vander Kooi, Dykema, Quisenberry, & Vandlen, 2010). Active learning may be of particular importance to the Millennial Generation of students currently populating college campuses. These students are known for their low tolerance for boredom (Johnson & Lopes, 2008) and the need to have near-constant stimulation to remain focused. They have also been shown to prefer small-group over large-class discussion settings (Hamann, Pollock & Wilson, 2012), but enjoy team collaboration (Shaw & Fairhurst, 2008).

THE CLASS SETTING AND PROBLEM

The Problems in Managerial Finance course is designed as a team-based course wherein students self-select into teams of two to four students and each team is required to analyze in depth, and formally present, one case. All teams are expected to read and prepare at least a cursory analysis for each case. Four case "briefs" are required to be

turned in during the semester. The students are all senior-level Finance majors and the course is considered the "capstone" course for the major.

The first semester the course was taught the case discussions were very uneven. One week there might be a very strong discussion with lively debate, with nearly all the students participating. The next week it could be virtually the opposite, with both the students and the instructor feeling uncomfortable with the lack of dialogue between the presenting team and the rest of the class. In addition, there is evidence that when an instructor leads the discussion, his/her implicit or explicit disclosure of a point-of-view can reduce student participation in the discussion (Hess, 2009). What, if anything, could be done to help ensure that there was a good discussion for each case?

THE NEW APPROACH

Calling upon experiences the authors had at professional academic meetings, the idea arose for creating a formal "discussant team" to provide an immediate response to the presenting team's case analysis and begin the broader class discussion of the case. Many academic meetings assign discussants to each paper that is presented. This ensures that there is feedback to the paper's author(s) and often elicits further discussion among the other attendees.

"The role of the discussant is to raise a few debating points about the paper to get the discussion started. The discussant's role is not to hammer a paper, nor is it to overly praise a paper (Avison, Kautz, Sigala, Whitley & Winter, 2005)." As stated by Davidson, "Discussants are charged with an important responsibility, bridging the gap between presenter and audience, offering (ideally) new insights, and so stimulating the audience (Davidson, 2003, p. 129). The advantages of using a discussant(s) to help engage an audience at academic meetings have been noted by numerous researchers (c.f., Coff and Zhou, 1999; Hamermesh, 1993; Weick, 1999). Weick (1999) suggests that it is extremely helpful to the audience if the discussant(s) can identify issues of a paper, attempt an enthusiastic analysis, and make a reasonable attempt to improve the work previously presented.

A search of class discussions of cases turned up only one similar approach being used in a strategic management course at the University of Southern California. In this course the professor utilized "Challenge Teams" that prepared questions for the presenting team, based upon their own independent analysis of the case (El-Haddid, 2011). The challenge teams lead the case discussions and are able to create spontaneous questions during the presenting team's delivery, as well as use questions they had prepared in advance.

A somewhat similar approach was reported by Bellman (2004), in which cases in an Entrepreneurship course were assigned to student "case leaders," who were tasked with leading the discussions. But in this instance the case leaders were only asked to answer three to five case-related questions, rather than critique the work and analysis of another set of students.

In the current finance case class, the discussant team is required to prepare the case as if it was their own to present. The presenting team must provide the discussant team with as close to a final draft of their report as is possible, at least 36 hours prior to the presentation. It should contain all calculations and analysis which will be presented. The role of the discussant team is to compare their analysis of the case to the presenting team's analysis, and then create a formal discussion of the presenter's work. The discussants' comments include everything from development of a problem statement to the conclusion, as well as relative to the case protagonists' recommendations as to what should be done. Any differences in analysis or opinion are noted and explained. At the conclusion of the discussant team's analysis the presenting team returns to the front of the class to face a general Q&A session from the entire class.

PRELIMINARY STUDY

In two recent Fall semesters there was a total of nineteen teams of students (two to four students per team) and each was randomly assigned one case to present and one case to discuss. The only "swapping" of cases allowed was for proven time schedule conflicts. Thus, the student teams were often out of their comfort zone on topics to present and/or discuss.

In order to ensure civility in the discussions, students were given guidelines for delivering critiques during the preliminary part of the course. An example of a critique was modeled by the instructor and the importance of being courteous was stressed. At the conclusion of the semester the students were administered a brief survey that

captured their satisfaction with the discussant-team method, along with measuring how effective they thought the method was overall, as well as in comparison with other courses in which cases were used.

The Survey Instrument. The survey instrument consisted of three parts. In the first section students were asked if they had been in any other courses that required the discussion of cases in class. If they responded "yes", they were asked whether those courses used instructor-led versus student-led discussions and whether the discussions were "structured" (the instructor called on students, students were required to present cases, a formal format for discussing cases was followed) or "open" (the instructor relied upon voluntary student discussion or responses to questions posed and no particular format for discussing cases was used). The students were then asked if they had developed a preference for instructor-led, student-led, structured, or open case discussions.

The second section of the survey consisted of a set of five bi-polar adjectives (e.g., Ineffective versus Effective) or descriptive statements (e.g., "Was Interesting to Do" vs. "Was Uninteresting to Do") about the use of official discussant teams on a 5-point semantic differential scale. The third section of the survey was an open-ended invitation to give any additional comments or suggestions about the use of official discussant teams in class.

RESULTS

Since the more- or less-favorable poles of some of the scales were reversed, they were adjusted before analyzing the data, such that a higher value on a scale was always more favorable. From the student perspective, anecdotal evidence suggests students strongly support the use of official student discussant teams, as can be seen in Table 1.

Table 1: Student Evaluations of Use of Discussant Teams in Case Analyses

Scale	Mean*	n	t (test value = 3.0)	Significance
(In)Effective	4.11	44	11.284	$p < .001$
Detracted from (Enhanced) Discussion	4.24	51	12.957	$p < .001$
(Un)Interesting to Do	4.18	51	11.785	$p < .001$
Should Be Eliminated (Kept)	4.25	51	9.588	$p < .001$
Had No Impact on (Enhanced) Learning	4.35	51	12.548	$p < .001$

*5-point semantic differential scale, with 5 = favorable, and 1 = unfavorable.

Since we did not have similar measures for instructor-led discussions, we tested each mean against the point of neutrality (3.0) on each scale. All five dependent variables were significantly more favorable than neutral ($p < .001$), indicating that use of the student-lead discussant method was very favorably viewed by the finance students.

With overwhelmingly positive evaluations of the case analyses employing student-team discussants, we wanted to determine if responses to other questions related to the degree of favor of the student-led cases. As a preliminary step, we factor analyzed the five semantic differential variables, to determine if more than one factor was present in the data. Results of the Factor Analysis are shown in Table 2.

Table 2. Factor Analysis of Semantic-Differential Variables

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.954	59.080	59.080	2.954	59.080	59.080
2	.734	14.684	73.764			
3	.624	12.473	86.237			
4	.427	8.534	94.771			
5	.261	5.229	100.000			

Extraction Method: Principal Component Analysis.

Employing a standard cutoff of Eigenvalue ≥ 1.0, there was only a single factor identified (Eigenvalue = 2.954), which accounted for 59.08% of the variance. Thus, respondents saw various *potential* aspects of merit of student case discussants (i.e., overall effectiveness, enhancement of discussion, interest, maintenance of method, and enhancement of learning) *as a single dimension***.**

Further analyses suggested that differences in previous use of cases affected current student preferences. First, those who had been exposed previously to an *unstructured* case method significantly preferred an *instructor-led* case presentation and discussion ($t26 = 4.228$; $p < .001$). However, those who had experienced previous instructor-led case discussions were more appreciative of student-led cases, with a student discussant team, than those who had not been previously exposed to them ($t31 = 2.183$, $p < .05$). Additionally, those who had previous experience with structured case discussions showed an aversion to instructor-led case discussions ($r = -.223$, $t26 = 2.126$; $p < .05$). Rather, the structured case-experienced students had a significant preference for student-led cases employing a discussant team ($t31 = 3.215$; $p < .01$).

CONTENT ANALYSIS OF OPEN-ENDED RESPONSES

The final analysis was a content analysis of the student responses to the open-ended question in the third section of the survey. Approximately two-thirds (64.5%) of the students entered comments to the question, "If you have any additional comments or suggestions, please add those here." The majority of the responses (87.5%) indicated satisfaction with the use of a structured discussion approach with an official student discussant team for each case. Sample comments included:

- Discussant teams provided very insightful perspectives versus the presenting teams.
- Hearing two perspectives of the same information and problems, plus how to solve them, enhanced my critical thinking.
- The structured format for discussions led to more understanding about concepts covered in each case.
- The formal discussant team approach showed that there are many ways to look at the same situation.

One very good suggestion from several students was to allow the presenting team to have time for an official "rebuttal" to the discussant team's critique of their case solution. We will implement rebuttals the next time the course is offered.

DISCUSSION

During each semester, discussions began somewhat instructor-led, but quickly became almost entirely student-led with the official discussant team leading the way. By the end of the semester the instructor only added summary information or corrected any potential misleading statements made during discussions. The atmosphere in the classroom was more relaxed than during instructor-led sessions. A relaxed classroom atmosphere has been found to be preferable to Millennials, and leads to more participation (Bracy, Bevill, & Roach, 2010).

From the instructor point of view, the authors can report that the use of discussant teams greatly improved the overall quality and quantity of class discussion of cases. The problem of the unevenness of discussion over the course of the semester was virtually eliminated. And, a very worthwhile unintended consequence was a noticeable improvement in the students' ability to both offer and receive criticism about theirs and other students' work. In each semester the students created a culture of respect for each other's opinions, and critiques were done in more of a gentle, developmental manner than sometimes happens at professional finance conferences!

In addition, it appears that the students found value and satisfaction with the approach. These results are likely to be found in other class settings using case studies, regardless of discipline. Any activity that has the potential of improving students' understanding of concepts, and enhancement of their critical thinking skills, is certainly worthwhile to try.

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The Truth about Lying: What Should We Teach About Lying and Deception in Negotiations: An Experiential Approach[1]

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ABSTRACT

The teaching of negotiations poses a particular dilemma for business schools in the area of ethics. It is normally accepted that negotiations often involve deception if not outright lying. Yet such behavior in other aspects of business activities is appropriately condemned. While fraud is illegal in all aspects of business including negotiation, ethical standards we might ideally like our businesses to adhere to are unrealistic in the area of negotiations. This paper suggests that business schools would do well to confront this dilemma; we should convey an honest and realistic notion of the role of lying in human behavior in general and negotiations in particular. We suggest two experiential situations that effectively confront this issue by triggering the complex behaviors that occur in negotiations This allows an honest discussion of the topic which results from a visceral of lying and being lied to Furthermore, the exercises allow each student to confront his or her responses to situations in which lying may result in short-term gain as well as their responses to others in the same situation.

Keywords: negotiation, lying, truthfulness, ethics, deception, "Tragedy of the Commons"

INTRODUCTION

> *"The tendency to tell lies is a natural tendency...spontaneous and universal."* Jean Piaget
> "*Lying is not exceptional; it is normal, and more often spontaneous and unconscious than cynical and coldly analytical. Our minds and bodies secrete deceit."* David Livingstone Smith,
> "*At every level, from brute camouflage to poetic vision, the linguistic capacity to conceal, misinform, leave ambiguous, hypothesize, invent, is indispensable to the equilibrium of human consciousness."* George Steiner

With each major scandal in the business world, there is a lot of hand wringing about business men and women, and the schools that educate our business leaders. For example, the past year has seen the exposure of Volkswagon's deception involving a massive program to cheat on diesel emissions tests; the company installed software "defeat devices" that would switch to a separate "clean" mode when the emissions tests were being administered and then back to a "dirty" mode under regular driving conditions. While the extent of the deception is still not known, it likely involved hundreds of engineers and managers including those quite high up. We can expect to see this situation become a standard case study of corporate malfeasance showing the ethical and financial costs of lying and deception. Similarly, Wells Fargo bank recently fired 5300 mostly low wage workers for improper sales tactics indicating a pervasive culture in the company that encouraged and pressured employees into at best questionable and more likely illegal activities. Senator Elizabeth Warren, called the CEO "gutless" expressing the frustration of many Americans angered over the lack of accountability of upper management, none of whom suffered any serious consequences.

These incidents involve lying and deception on a "macro" level (organizational culture) as well as lying and deception on a "micro" level involving countless individual acts of lying and deception.

Business schools are asked to "solve" this problem, turn out more "ethical" men and women, reduce the kinds of incidents cited above. These incidents will trigger calls for new courses in ethics and "social responsibility," but after decades of these courses, there is scant empirical evidence and certainly little anecdotal evidence that there has been any noticeable effect resulting from these efforts.(Gavett, 2013). Perhaps part of the reason is the naïve and simplistic approaches to the topics of lying and deception.

It is not the objective of this paper to focus on the "macro" issue of truthfulness in business, but rather to focus on the issue in one important and ubiquitous aspect of business; i.e. negotiations, where lying and deception is often considered acceptable and even encouraged. We must figure out ways to teach about ethical behavior yet acknowledge the legitimate reality of lying and deceipt in many realms of organizational behavior.

LYING: WHY AND HOW WE DO IT

Lying appears to be a deeply embedded feature of our humanity. Evolutionary biologists suggest that lying is a byproduct of our ability to empathize, the ability to understand what might be going on in another's mind as well as recognizing other minds apart from ours. We are able to anticipate how others might respond. Such a skill might have evolved because individuals and groups that have this ability would likely increase their chances of survival.(Pinker, 2007) Lying and deception are a natural byproduct of this empathy. Other species deceive (particularly other primates) but the human ability develop complex spoken language dramatically increases the opportunities to deceive. Like many deeply embedded human propensities, there are potential benefits and potential costs to lying; otherwise humans would do it all the time, and we don't.

It should not be surprising that deceit and lying is often an important part of negotiations. One observer of negotiations stated: "*on one hand the negotiator must be fair and truthful; on the other hand he must mislead his opponent. Like the poker player, a negotiator hopes that his opponent will overestimate the value of his hand…The critical difference between those who are successful negotiators and those who are not lies in this capacity both to mislead and not to be misled.* (White, 1980) Of course this is true in human communications in general. Lying and deception can yield substantial benefits to the individual negotiator but there are real and potential costs as well. Individuals known to be untrustworthy find it difficult to find useful negotiating partners going forward and find it very difficult to identify crucial common interests and joint gain.

We should emphasize that almost all of our important negotiations involve people with whom we have an on-going relationship. This is true of our personal negotiations with family and friends as well as our professional lives with superiors, subordinates, co-workers, clients, customers, and suppliers. It is one thing to lie in a situation where you will never see the other person again, but the potential consequences of lying take on added serious potential costs when we are involving people with whom we have long term relationships.

Most important negotiations involve some degree of deceit. As educators of negotiations, we need to generate an honest discussion of the role lying and deception play in negotiations and how negotiators might effectively defend against lying and deceit. Students of negotiations (or organizational behavior) need to understand the basis and nature of lying and deceit, as well as their limited skills in both carrying out or detecting lies or deceit. Finally students need to improve their skills, particularly in detecting deception and dealing with people who practice this approach to negotiation. Teachers in this field would be misleading to act as if all lying and deceit is unethical. Students need to be able to arm themselves; they need to understand the role of lying and deceit, understand ways of detecting and reacting to it, and need opportunities to practice these skills.

This paper will focus on two exercises designed to test students' ability to detect lying and the resulting discussion of how to increase skills in detecting deceit. It is suggested that experiential exercises provide a 1more impactful and realistic way to address the issue of lying compared to the "social responsibility" approach commonly used in business schools.

IS LYING LEGAL IN NEGOTIATING: WHAT DOES CASE LAW TELL US

Virtually all negotiators engage in some deception. When asked "what is your bottom line," most either lie or don't answer the question. We often inflate our first offer far in excess of what we plan to settle for. We introduce proxy issues claiming they are important when they aren't in order to exact concessions. We bluff or lie about our interests.

G. Richard Shell has a comprehensive discussion of this topic highlighting the following Court decision:

> "In a business transaction both sides presumably try to get the best deal. That is the essence of bargaining and the free market. No legal rule bounds the run of business interest. So one cannot characterize self-interest as bad faith. No particular demand in negotiations could be termed dishonest, even if it seemed outrageous to the other party. The proper recourse is to walk away from the bargaining table, not sue for "bad faith" in negotiations" (US Court of Appeals,1988)

Shell goes on to state that this conclusion assumes no fraud (misrepresentation of a material fact on which the victim reasonably relies and which causes damage." (Shell, 1991)

DETECTING LIES...AN ARMS RACE

Not only do we humans lie frequently, but we work hard at detecting deceit on the part of others. Extensive literature and research exists on this topic (Smith, 2004). Many techniques for detecting deceit are suggested in the popular literature. (See Appendix 1). Examples of what someone should look for in detecting lying include such indicators as a person looking away, avoiding eye contact, touching the head, stuttering, pauses, or a higher voice pitch. However, it appears that we aren't any better at detecting liars than we are at telling lies. There is no evidence to suggest that these so called indicators of lying are valid, particularly when dealing with good liars. Some technologies such as the polygraph, or more current technologies such as thermal imaging and brain fingerprinting are promising, but these aren't available to the average individual in a negotiating situation.

Paul Ekman (1992), in widely publicized research, claims that when people lie, they involuntarily display fleeting facial expressions that give away their deception and that we can be trained to detect these signals. But many doubt that many of us lay people could be trained to detect these signals. Perhaps in the future some new technologies (e.g. voice stress analyzers, MRI, thermal imaging technology) might prove practical, but none has so far. Appendix 2 suggests advice for protecting against deception

In light of this, we negotiators need to be ready for deception; we need to figure out how to detect lies and how to protect ourselves, but research has shown that in general, we aren't very good at detecting lies. Even trained professionals seem to do only slightly better than untrained people.

HOW CAN WE TEACH ABOUT ETHICS YET ACCEPT BEING "CASUAL" ABOUT THE TRUTH?

This is the dilemma. There would certainly be disagreement about answering such a question but it is safe to say that how one acts in a negotiation will be affected by the context and culture. Situations carry implicit rules. It is acceptable to bluff in poker but it is not acceptable to outright cheat. Different cultures may influence the degree to which bluffing or misrepresentation is deemed acceptable.

In general negotiations, one is not expected to reveal strength or intentions prematurely. But discretion in making claims and statements should not be confused with misrepresentation. In general in our culture our "rules" forbid and should penalize outright lying, false claims, bribing an opponent, stealing secrets or threatening an opponent. While there may be a fine line distinguishing legitimate and illegitimate practice in disclosing the facts, there is a line and again we are distinguishing between the careful planning of when and how to reveal facts vs. outright lying. (Shell, 1991)

At some point, the courts acknowledge the principle of caveat auditor (" let the listener beware"). For example exaggerations in advertisements (called "puffing") are forgiven (e.g. "this unit has a superb view"). Negotiations also involve often not giving out information that the other side would ideally like to know. Are we under an obligation to give out all the information we have? In extreme nondisclosure situations the courts might frown on this, but in most situations full disclosure is not required. Similarly, being evasive is not usually punished. This, of course, can change. There may be cases moving forward in which what is now acceptable will become illegal. This is not to suggest that we should teach our students to just "obey the law" rather than to engender a sense of right and wrong.

Shell (1991) suggests the following guidelines:

- never condone outright lying or gross misrepresentation
- be aware of the importance of avoiding deliberate misrepresentation or exaggeration
- try to stay away from the ethical no-man's land

Certainly some lies as in outright fraud are illegal. Shell goes on to define common law fraud:

- False representation of a material fact
- Knowledge or belief as to its falsity
- An intent to induce the other party to rely on the representation
- Justifiable reliance by the injured party
- Damage or injury to the innocent party

Skilled negotiators know how to avoid premature disclosure without lying. They use such techniques as saying truths but saying little, or following up a question with a question to deflect the first question.

The suggests we should be very careful in our negotiations, but certainly many negotiations involve attempts to mislead; we can't really expect full disclosure in negotiations any more than in a flea market. This suggests there is a very fine line between what might be deemed ethical and what might be unethical and people would disagree about where this line is. It is unrealistic to suggest that we could suggest this murky view of negotiation ethics any clearer.

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WHAT SHOULD WE TEACHING ABOUT LYING AND NEGOTIATIONS?

All this leaves the negotiation teacher with a dilemma. We certainly need to encourage our students to be ethical and trustworthy negotiators, but what does this mean? We can certainly teach about models of ethical behavior; we can model ethical behavior in negotiation. We can cite countless examples of consequences of lying in the business world. Yet, it would be misleading to ignore the strategic role of lying and deception in negotiations. Negotiations usually involve managing perceptions and impressions; This can often involve some deception in ways few of us would condemn. Even those we would consider highly ethical negotiators are careful about what information to disclose and when. This is likely to certainly have the potential for deception.

Consider a negotiator who never gives false information; however, by carefully managing the timing of when and what information to give out he can significantly she can significantly affect the perception of the other party, often to her expected advantage. For example a job applicant with no other offers may tell a recruiter when asked about competing offers may say (and honestly believe). "I expect to receive offers soon." This may be the truth and is designed to affect perceptions. But it is deceitful to some degree. It also does not directly answer the question. Few of us would condemn this act of deceit.

Carefully crafted and managed experiential exercises provide an opportunity for students to confront the negotiator's core dilemma: should I cooperate or compete and how to react to the other's actions. In addition the exercises allows the students to gain insight into their skills in detecting lying in others.

Below are two powerful exercises that encourage students to explore the following issues in depth.

- The role of lying and deception in negotiation
- How they individual tend to react to ambiguous situations with costs and benefits for both cooperation and competition
- Identify what each student tends to look at in trying to detect deception; what tends to give people away
- Non-verbal communication as it relates to lying
- Provides a platform for discussing current knowledge about how and whether lying can be detected emphasizing that most of us are very poor at detecting lying
- Discuss the ethics of lying and deception in negotiation
- Identify steps that can be taken to protect ourselves against deception

WIN AS MUCH AS YOU CAN (PFEFFER, 2007)[2]

The exercise allows each student to explore his or her reaction to a situation in which lying can result in short-term gain and to experience a very visceral response of others if he or she does lie. Similarly, the exercise allows each student to experience their reaction to others put in the same situation; i. e. to experience their reaction to others who lie and deceive. Finally, each student can practice skills in the ability to detect lying or at least identify some of their blind spots.

There are a variety of exercises that allow students to experience highly ambiguous situations where decisions have to be made whether to cooperate or compete with a counterpart. These games could be considered variations of the "Tragedy of the Commons" dilemma. "Tragedy of the Commons" refers to a situation of 'private gain vs. public good, or when individuals acting in self-interest end up depleting a shared resource. In this exercise, groups or individuals must choose whether to act for individual or group benefit and must react to an "opponent" who is also making decisions. The game provides numerous opportunities for players to judge the truthfulness of others' declarations.

This is a typical variation of a Prisoner's Dilemma exercise and there are many versions. Prisoner's Dilemma are situations where an outcome depends on simultaneous decisions of two parties who must decide whether to

"cooperate" or "compete." In the version I use, students are divided into groups of four; each member of this quartet is given a card with an "X" (compete) on one side and a "Y" (cooperate) on the other. There are ten rounds to the exercise; in each round, each participant in the quartet must at the same time place the card on the table with either the "X" or "Y" facing up. The payoff (see below) is based on the pattern of X's and Y's that are played among the four. There are bonus rounds (rounds 5, 8, and 10) where the outcome (positive and negative) is multiplied by 3,5,and 10 respectively. In other words, whatever score one gets on round 5 is multiplied by "3", in round 8 by "5" etc. This exercise is done without talking except before bonus rounds where individuals can talk and negotiate about what has happened up to then and their intentions moving forward.

Below is the payoff matrix.

If all throw an "X"	Everyone loses $1
If there are 3 "X's" and 1 "Y"	"X's win $1 each and the "Y" loses $3
If there are 2 X's and 2 "Y's"	Each" X" wins $2 and each "Y" loses $2
If there is 1 "X" and 3 "Ys"	X" wins $3 and each "Y" loses $1
If there are 4 "Ys"	Each "Y" wins $1

A maximum of 100 points can be gained jointly by a quartet in the exercise. This maximum joint gain can only be obtained by the four cooperating (everyone throws a "Y" on all ten rounds). In this example, each of the four would gain 25 points. However, an individual by defecting (or freeloading) could gain more than 25 points although the group sum would suffer. This is a classic "tragedy of the commons" or prisoner's dilemma—private gain vs. public good. As in most games of this type, an individual can gain the greatest score by convincing others in the quartet to "cooperate" and then become a defector. Groups can do quite well by all cooperating but there is always the risk that one or more will defect.

In this exercise those students who act deceptively end up viscerally experiencing their own feelings of such actions as well as the often very strong reactions of their fellow students. Their classmates are typically quite explicit in their response when lied to. This author has had the experience of meeting an ex-student ten years after this exercise who remembered every detail of the exercise and the name of the individual who deceived him. Despite my claiming that "it was just a game," my ex-student stated "I wil hever trust that guy if I ever see him again." Following the exercise, the results from each quartet are shared with the class and the issues cited above are discussed. This is an exercise that students will remember for years

FRIEND OR FOE: A TEST OF DETECTING LYING

This exercise directly focuses on students' ability to detect lying and as in the first exercise, will trigger a discussion of the role of lying and deception in negotiation as well as our skills in detecting lying. Finally, research on the topic of detecting lying can be shared to enrich the discussion.

The exercise, based on a DVD produced by Harvard Business School Publishing (2007) is very useful for directly involving students in a realistic discussion of lying and lying detection. The DVD allows students to view five sets of two non-actors (ten overall) in a "prisoner dilemma" situation. Pairs of game players face off to decide how to split a sum of money. If both decide to be "friend (cooperate)," they would split the earnings from round A. If both said "foe (compete)", neither win anything. If one declares "foe" and one declares "friend," the person who said "foe" will win all of the money. This is a classic Prisoner's Dilemma exercise. Each player is given a brief time to declare to his or her counterpart. Obviously, each will declare that they will cooperate or go "friend." It is the brief declaration that the students observe and judge as to its truthfulness. The two players were partners in a previous round of the game show; they had jointly won the money that is at stake in this round.

Before seeing the segments and after describing the exercise, students are asked to predict how many of the ten observed players the student accurately predicts as to their truthfulness. Students typically think they are "pretty good" at this and predict they will be accurate on six to eight out of the ten. It is made clear to the students that this is not a "scientific" test of their skills in lie detection; in real life we would likely have much more data on which to basic a judgement of an individual's truthfulness. Yet it is a very engaging method of talking about the topic. Results are shared in front of the class. I have given this to over fifty classes. Out of ten, the average is around 4.7 and I have never had a class with an average higher than 4.9. This, of course, means that students would do better

flipping a coin. Again, I want to state that this is not science. This same exercise has been given to hundreds including many in various aspects of law enforcement and intelligence (Wheeler, 2007). The results are similar There will be a few students who score well above average (7 or 8). This could be luck or skill. There will also be some who score "1" or "2". Those few who score "well" seem disproportionally to be international students, at least in this author's experience

OTHER RESOURCES ABOUT LYING AND DECEPTION

The "Friend or Foe" show referenced above was based on a British show called Golden Balls. There are two episodes available on Youtube that are particularly illustrative and useful. One episode presents an innovative approach for dealing with the potential for deceipt and also provides an interesting segue to a discussion of game theory should the instructor wish to discuss that topic (https://www.youtube.com/watch?v=S0qjK3TWZE8)... The second (https://www.youtube.com/watch?v=p3Uos2fzIJ0) shows a very high stakes example and provides a compelling test of students' ability and confidence in detecting lying.

A humorous approach to this topic can be seen in the film, **The Invention of Lying** (2009). As the title suggests, writer and actor, Ricky Gervais, imagines a world in which there is no lying and of course, with no one lying, there is no ability to detect lying. The plot involves the first person to tell a lie and the results. Finally, Duke professor, Dan Arielly, has been studying the subject of lying for a number of years and among other publications, has produced a film, "Dishonesty: The Truth about Lies."

BASIC LESSON FROM THE EXERCISES

Apparently most of us lie a lot. One study found that about 40% of the time the subjects lied about feelings, actions, plans and whereabouts. Lying seems to be normal, rather than the exception. Another study found that 60% of newly introduced people lie to one another within minutes; dating couples lie even more. Twenty-five percent of resumes contain significant lies. So it should be surprising that negotiations are full of lies and deceptions; it is difficult to imagine negotiations without some deception. Adler claims that "the critical difference between those who are successful negotiators and those who are not lies in this capacity both to mislead and not to be misled." (Adler, 2007)

CONCLUSION

In confronting the issue of ethics in business negotiations, we would better serve students by generating an honest and realistic discussion of the role of lying and deceit in human behavior in general and negotiations specifically. Rather than discussing cases of corporate malfeasance and the few times where such activity is prosecuted, a better approach is to put students in a situation where they feel realistic pressure to act deceptively and to experience their feelings however they respond and to experience the reactions of others to their behavior. Finally, insofar as deception and lying are ubiquitous aspects of human behavior, we can help students understand current knowledge in how we detect lying and deception.

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APPENDIX 1: PURPORTED INDICATIONS (MYTHS?) OF LYING AND DECEPTION

- Expressions that don't match words, less
- What is stated and what is not stated
- Individual is too "rehearsed" as if giving a memorized speech
- Contradictions within the speech, inconsistencies
- Tension: sometimes the pitch of the voice elevates
- Some research suggests dilated pupils (DePaulo, 2003)
- Indications of guilt, over-compensation
- Microexpressions
- intuition

DePaulo (2003) along with other experts adds there are many myths about body language and that many of the behaviors cited above are not very predictive of lying and even if the above factors were true, very few of us would have to ability to accurately pick up these cues in real time.

APPENDIX 2: ADVICE FOR PROTECTING AGAINST DECEPTION

We can increase the chances of protecting ourselves by being humbly aware of our limitations in the area of lying detection:

1. Before bargaining begins,
   - research the background of your counterparts
   - set special ground rules for bargaining: some coaches recommend trying to sign a "pre-negotiation" agreement stating that the parties will commit themselves to using higher standards such as disclosing all material information, abstain from unreasonable delays; abstain from imposing hardships on the other

2. During Negotiation: Trust but verify and take notes
   - Look for potential signs of deception; is the person behaving very differently than before
   - Ask questions in different ways and ask the counterpart to "come clean"
   - Ask questions to which you already know the answer
   - Include claims as part of the final agreement and use contingency agreements for protection

Of course, the best way to increase the likelihood that others won't lie to us is to be trustworthy ourselves.

Public Sector Negotiation: A Real World Integrative Case

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ABSTRACT

Negotiation skills have long been recognized as one of the critical "soft skills" that management and business students should develop for use in their professional careers and personal lives. The relevant skills can be taught in many business courses including principles of management, organizational behavior, and negotiation, as well as similar public administration courses. In their classic book, *Getting to Yes,* Roger Fisher and William Ury convincingly make the argument that the method of principled negotiation should be utilized in most integrative bargaining situations (Fischer and Ury, 1981, pp 9-14). The case presented here, *The Wyatt Public School District,* is an excellent one for teaching the basics of principled negotiation strategy. The nature of the case is integrative, versus distributive, because it meets the broad definition of integrative models as first identified in the seminal work *A Behavioral Theory of Labour Negotiations* (Walton and McKersie, 1965). The case is best approached by parties utilizing the integrative process because, like most labor contract negotiation situations, it contains all of the relevant factors; several issues to be negotiated, the possibility of mutual gains options, a sharing of information and perhaps most important – a continuing long –term relationship between the parties (Carrell and Heavrin, 2013, pp186-188).

The Wyatt Public School District case (real school district, name changed) offers several key attributes that make it ideal for classroom usage: (1) it is based on an actual case, not a fictitious one, which gives it critical "real world" student appeal; (2) it has been classroom tested and students report it increased their negotiation skills and their confidence to engage in a negotiation; (3) it includes both economic and non-economic issues which students can easily understand , evaluate, and bargain successfully due to their own educational experiences; (4) it was successfully mediated by the authors, and the actual settlement terms are available upon request to interested faculty and ; (5) the union and management teams both strongly desire to settle in negotiation and avoid final – offer arbitration, which is the next step under state law (see Carrell and Bales, pp 22-36 for discussion of the final – offer process in the public sector).

Keywords: Negotiation case, public sector, integrative bargaining

APPLICATION

The *Wyatt* case has been designed for use in an undergraduate or graduate classroom, and has been successfully classroom tested with hundreds of students. The simulation is a public sector event (collective bargaining), however, the real-life dynamics inherent in the simulation, fit perfectly within any private sector or public sector course design: group planning and strategizing; relative negotiating power/leverage; timing; separate and mutual interests; monetary and non-monetary issues; potential for packaging and trades; BATNA: Best Alternative To a Negotiated Agreement (Carrell, Heavrin and Manchise, 2014, p 245); major consequences for not reaching an agreement; opening statements; initial proposing and counter proposing and constituencies who must ultimately approve of the settlement makes this real-world simulation. The nature and complexity of the role-play forces the individual student to think about their and their team's approach during the preparation, opening, negotiating and settlement stages of negotiations. The authors believe that after a candid and thorough processing out (classroom discussion) of each stage of negotiations, the instructor's course learning objectives will be enhanced.

The *Wyatt Public School District* case is a negotiation is about a renewal contract agreement between the school board and the teacher's union. The parties have secured the services of a mediator to help facilitate this last day of negotiations thus making the simulation also open for mediation training (an additional feature). All of the common negotiating challenges are present: a deadline (the last mediation), consequences for not reaching an agreement (*final-offer arbitration)*, relative bargaining leverage (about equal), confidential information (supplied), sufficient mutual information to negotiate the issues (also supplied), and issues laden with separate and mutual interests (to be discovered by the parties). Students are offered the opportunity to practice integrative/principled negotiations as explained in *(Getting to Yes, Fisher and Ury, 1981, pp 9-14)* by the need of the parties to solve the problems surrounding the sick leave bank, the grievance and benefit election forms, controversial hiring decisions and

certified employees. In line with the reality of most negotiations, students are also placed into a real-world setting to negotiate economic/monetary issues: the salary schedule, retiree insurance and bereavement leave. These discussions can be governed by pure integrative/principled techniques, or as determined by the instructor, combining integrative/principled and distributive (proposing and counter proposing) until a settlement is reached.
The students should be divided into a series of two separate teams. The school board team should consist of Superintendent Sawyer and Assistant Superintendent Savara. The teacher's union team should consist of Union President Thomas and two negotiating team members. The teams are given the appropriate *mutual and separate confidential* background information to help them develop negotiating strategies. Both teams should be given about one half hour to prepare for negotiations. The instructor may provide realistic additional information not provided in the case, but the instructor should not offer any advice which would place one team at the disadvantage of the other. The students should be encouraged to construct and present an opening statement to set the tone of the negotiations. The instructor is free to determine the consequences for not reaching an agreement. The negotiation ultimately challenges students to assess their natural style of negotiating.

Learning objectives
As a resulting analyzing this case, students should be able to:

1. Understand the necessary negotiation processes of compromise and trade-offs of interests by the parties, which are needed to reach a settlement.
2. Experience the real – world pressures to reach a settlement in light of a less desired alternative (BATNA) if no settlement can be reached by the parties.
3. Develop realistic mutual – gains options to resolve conflict involving both economic and non-economic issues that are important to both parties.
4. Understand the need to openly discuss one's own interests as well as that of another party in an effort to resolve conflict and develop a resolution.
5. Realize personal growth through the utilization of a negotiation and conflict resolution process.

Principled negotiation concepts
The *Wyatt Public School District Case* emphasizes key concepts of principled negotiations in *Getting to Yes* (Fischer and Ury, 1981). The concepts and techniques are designed to help negotiators efficiently reach mutually satisfactory agreements, avoid impasses, effectively deal with difficult counterparts and maintain/enhance ongoing relationships. To accomplish this goal, the case requires a basic understanding of the following concepts: BATNA, the value of interests, inventing options of mutual gain and the application of objective standards/criteria.

1. BATNA = the **B**est **A**lternative **T**o a **N**egotiated **A**greement (Fisher, Ury and Patton, 2011, pp.99-108)

Students should know that before starting a real-life negotiation, whether it be for a salary increase, the purchase of a car/home, the acquisition of a rental agreement, or in this case a renewal collective bargaining agreement (CBA), the student/negotiator must realistically assess their best course of action in the event they do not reach an agreement, their BATNA. Once a negotiator clearly understands what they could/would do if they fail to reach an agreement, many of their decisions about how and what they will propose / agree to will be greatly influenced by this knowledge. A student will learn that If a final offer falls short of their BATNA, the offer should be rejected. Knowledge of one's BATNA also clearly identifies a negotiator's relative bargaining power (Carrell, Heavrin and Manchise, 2014, pp.109-111). A strong BATNA provides leverage. Ordinarily BATNA assessments are done in private. However, in the *Wyatt* case both parties share the same undesirable BATNA, final-offer arbitration. This unwanted outcome strongly motivates both sides in this case to deal more reasonably with each other.

2. Understanding the Value of Interests (Fisher, Ury and Patton, 2011, pp.42-57 and Carrell, Heavrin and Manchise, 2014, pp.109-110, p.245 and 251-252)

Exactly what is an *interest* and how is the knowledge of an *interest's* value important to a negotiator? An interest is a requirement or necessity for well-being and/or survival. Students should discuss this definition and understand its impact upon negotiations. They need to know that the wording or the articulation of all negotiating proposals are just reflections of a negotiator's attempt to satisfy their underlying *interest(s).* The authors of *Getting to Yes,* Fisher, Ury and Patton (2011) give additional insights about the role *interests* play in negotiations by clarifying and describing them as "the basic human needs of security, economic well-being, a sense of belonging, recognition and control over

one's life." (Fisher, Ury and Patton, 2011, pp.50-51 and Carrell, Heavrin and Manchise, 2014, pp.92-93). The lesson for students is that the proposals of the *Wyatt* CBA are in some fashion satisfying these interests.

For example, the school board's *interest* within the sick leave bank issue. The board wants some control over the benefit distribution. The teachers could also use this *interest* knowledge by presenting a proposal that the board drop their grievance form position in exchange for their sick leave bank position. Both parties get a degree of control over two non- high priority issues.

3. Inventing Options of Mutual Gain (Fisher, Ury and Patton, 2011, pp.58-81)

The process of inventing options for mutual gain incorporates the previously gained knowledge of *interests.* Consider the interest underlying the Wyatt case's salary schedule. For both parties it is mostly economic. The school board believes it has a finite amount of money to devote to salary increases. The teachers lament they have not had a raise in many years. Now employ the techniques of inventing options of mutual gain. What if the teachers received a 2% salary schedule increase at the beginning of the school year and $75,000 of the energy savings was distributed at year end as a onetime bonus to teachers who had a near perfect attendance (saving substitute pay), or for excellent evaluations, or the achievement of an additional degree? An option of mutual gain satisfies both parties' *interest(s)* and generally creates additional value for the negotiators.

4. The last *Principled Negotiation Technique* one could utilize in the *Wyatt Case* is known as *Insist on Using Objective Standards/Criteria*, (Fisher, Ury and Patton, 2011, pp.82-96).

The instructor adopting this case can provide students with reasonable standards/criteria, for example: 1. Salary increase: the average wage increase for public school teachers in the previous year was 1% - 2.5%; 2. Bereavement Leave: most teacher contracts cover only the immediate family; 3. Sick Leave Bank: most contracts include a maximum of six weeks. The instructor select other objective standards/criteria to provide to the students. The students often learn the persuasive impact these objective standards/criteria have on resolving difficult issues.

Questions

At the end of the negotiations, all groups should candidly participate in a debriefing of the experience. The authors like to compare settlements, especially for creativity and options of mutual gain. We hold a class discussion of original and revised assessments of negotiating leverage, the use of timing techniques and the impact of intra-organizational dynamics. We also like to ask the following questions:

1. What did your counterpart do well to help facilitate the negotiating process and effectuate a settlement?
2. What did your counterpart do which interfered with efficient, durable and effective settlements?
3. Did the teams utilize trade – offs of issues to reach a settlement on some issues , if so which ones?
4. Was it helpful to know the high, medium, low priority for each issue?
5. Were all of the participants able to separate the people from the their positions (Fischer and Ury, 1981, pp.9-13)
6. Was it helpful when the parties shared their reasons to need / desire an outcome on an issue?
7. Did the parties discuss or refer to their need to cooperate because they had a long-term continuing relationship ?

THE CASE

The Wyatt Public School District case contains four handouts that are provided to students: (1) Mutual Background Information , Table 1, which all students receive; (2) Confidential Information for the Union President: Louise/Lou Thomas, Table 2, which only students on the union team(s) receive; (3) Confidential Information for the Superintendent : Sean/Sara Sawyer, Table 3, which only students on the management team(s) receive; and (4) a Tentative Agreement (TA) form, Table 4, which each union and management team receives.

At the start of the negotiation the instructor explains that the case is about a labor contract negotiation between a local teachers' union and the school board. The chief negotiator for each are Louise/Lou Thomas, the union president, and Sean/Sara Sawyer, the Superintendent. A class may be divided into two teams – one management

(school board), and one union (teachers), or students may be divided into an equal number of management / union teams of 3-4 students each. Then all students are given copies of the Mutual Background Information (Table 1), and members of each team receive copies of their Confidential Information (Table 2 or Table 3). Finally, each team is given a copy of the Tentative Agreement (Table 4) and instructed that an agreement is only reached when a signed TA form is submitted to the instructor, and it must contain a summary of how each of the seven issues was resolved. The teams should be allowed about 1 ½ to 2 hours from start to finish to complete the simulation.

Table 1: MUTUAL BACKGROUND INFORMATION FOR BOTH PARTIES

After three months of active negotiating, the Wyatt Public Schools System (the administration's collective bargaining team) and Wyatt Teacher's Union (WTU) agreed to several issues, but reached an impasse over some critical remaining issues. Both sides strongly desired to reach a new Collective Bargaining Agreement. The current Collective Bargaining Agreement (CBA) expired three months ago, but by state law remains in effect and in full force until a new CBA is ratified and implemented. The CBA covers 145 teachers and staff personnel in the school system. Due to declining state appropriations and the school system's gradually declining enrollments; it has been five years since the teachers last received a raise. During the past year, Tom/Tina Savera, the former superintendent, received a vote of no confidence from the teachers' union. He was then removed by the school board and replaced by Sean Sawyer, a former elementary school principal who enjoyed strong support from the teachers. However, since Sawyer, the new chief negotiator for the administration, was a brand new superintendent with only thirty days on the job as negotiations began, the board rehired Tom/Tina Savera as Assistant Superintendent (new position) to assist Sawyer with negotiations, to handle the system's budget and to respond to all teacher grievances and issues under the labor agreement. The school board gave its full support to Sawyer and will likely approve any agreement that is within the board's forecasted budget.

All the members of the union's negotiating team know that the school board members instructed Sawyer to gain some concessions for what they believe to be previously negotiated away management rights. Sawyer knows some of these issues would not sit well with the teachers' negotiating committee. The WTU negotiating team would view them as unfair and only on the bargaining table because a raise was possible.

When the two sides first declared impasse the State Employee Relations Board (SERB) imposed the provisions of the state law which allows only thirty calendar days for an appointed mediator to meet with the parties and find a mutually agreeable tentative agreement (TA). The TA must then be approved by the school system board and ratified by a majority of the union membership. If mediation is not successful, then final –offer arbitration will be used to decide all unresolved issues. The mediator cannot by state law serve as the arbitrator. Under final – offer arbitration each side submits a package of a last offer on each issue and the arbitrator chooses one of the two packages as the final and binding decision. There cannot be any middle ground decision; the arbitrator must pick one of the two proposed packages. While many cases have been resolved in mediation, the final –offer arbitration process rarely been used - only three times in the past decade (not at this school system), and since it was authorized, the administration prevailed in two of the three cases, and a union in one. As of today, the mediator met three times with the parties. Today is the only mediation day left (in the thirty calendar days). The parties have only one session remaining in which they can reach a tentative agreement, or by law, submit a final offer package which includes a final offer on each unresolved issue and enter into final –offer arbitration.

A brief summary of the seven unresolved issues at the end of the last mediation session are listed below. Please also carefully review the respective confidential information (administration or union) for details about the current positions and the reasoning behind each issue.

1. **Salary Schedule**: The current salary schedule, similar to most other school systems, includes a twenty step process based solely on years of seniority/service within the school system. The salary schedule has two tables: one for teachers with a BA degree and the other for teachers with a MA degree. The MA schedule is 1.5 times higher than the corresponding BA level of seniority. This difference in pay incentivizes teachers to obtain their MA degree.

2. **Sick leave bank**: This benefit allows teachers to voluntarily contribute earned sick days to a pool which may be utilized by a teacher with an extended illness. The availability of the use of the pool's

sick leave is controlled by a five-person committee (three teachers and two administrators). The pool is limited to providing $25,000 of sick pay per year.

3. **Grievance and benefit election forms**: The two forms appear as contract language in the current CBA. They cannot be changed, except by mutual agreement.
4. **Hiring decisions**: The current CBA allows the superintendent to hire new teachers and place them on the salary scale according to their years of service. The superintendent can give extra service credit for past teaching experience and/or experience equivalent to teaching.
5. **Retiree insurance benefit**: The current CBA provides all retirees up to age 65 a $200 per month insurance stipend to help them pay for health insurance. This "bridge" was added in the CBA ten years ago as a retirement incentive for employees who are under age 65, and not yet eligible for Medicare. Currently 46 retirees receive this benefit.
6. **Certified employees**: Under the current CBA only full-time teachers certified to teach in an area can be hired as teachers.
7. **Bereavement Leave**: The current CBA provides for two days paid leave in the case of a death of an immediate family member, first cousin, aunt, uncle, niece, nephew, or immediate in-laws of these relatives.

Table 2: CONFIDENTIAL INFORMATION FOR THE UNION PRESIDENT: LOUISE/LOU THOMAS

You and your negotiating team are frustrated with the lack of progress with the collective bargaining process. You believe the teachers would ratify a tentative agreement that included at least a two percent salary increase for all pay grades because the state budget information led you and them to believe at least that level of funding was available. The team (and you) trust Superintendent Sawyer, but both of you have little confidence in Tom/Tina Savera's willingness to reach an agreement with the teachers. Savera, they suspect, may even try to keep the administration from agreeing to any new contract and force the next step in the process: final –offer arbitration. The team members fear final-offer arbitration because the school board could place a zero percent salary increase on the table as their final offer. If at all possible, your side wishes to avoid the process. The team members are ready to stay today for as long as it takes to get a new contract. They feel the new CBA should contain a 3% salary increase for all teachers. In general, your team's general priorities and positions on each of the remaining issues are:

1. **Salary Schedule**: The current projected personnel budget for the next calendar year is $7.54 million, which includes $220,000 unspent and thus available for teacher raises, and $1,625,000 in the "Rainy Day Fund" that is available for one-time expenses such as weather emergencies, capital expenses, etc. Last year the board spent $1.7 million from the Rainy Day Fund. Energy savings due to a brand new lighting system are expected to save about $125,000 per year. A one percent raise for everyone in the system (union teachers, staff and non-union administrators) costs $110,000/year. The administration's last offer to the union was a 3% salary increase but that would necessitate the elimination of the retiree insurance benefit ($110,000 in annual savings). Your team has all but promised the teachers a 3% salary increase. (high priority)
2. **Sick leave bank**: The team members are adamant that this benefit be continued. Because days are donated by teachers who have earned them, the team does not understand why the administration has proposed elimination of the benefit. In addition, the union has noted only three employees have ever utilized the Sick Leave Bank since its creation six years ago. (high priority)
3. **Grievance and benefit election forms**: The committee members want to keep the forms in the CBA so they cannot be changed, except by mutual agreement by both the union and the administration. An attempted change of the forms last year by Savera would have caused a member to have lost a major grievance due to missing Savera's shortened grievance filing date, from 30 days to 15 days. Savera was frustrated when the union would not agree to his proposed modification. (medium priority)
4. **Hiring decisions**: Several of the union negotiating team members are upset because last year Savera hired a new teacher with only two years teaching experience, but eight years of counseling experience. The new hire was placed on the MA salary schedule at the ten year pay level. While no one disputes the new hire has worked out very well, the rumor is Superintendent Sawyer may make similar hiring decisions for "hard to hire" teaching positions (math, science, technology, etc.) in order to offer competitive salaries to applicants. The union wants some say in these situations. (medium priority)
5. **Retiree insurance benefit**: The administration proposes to eliminate this benefit to generate $110,000 in annual savings, which would free up the additional funds needed to provide a 3% salary increase to everyone. The administration has also proposed that if this benefit is not eliminated, the salary offer will

be only 2%. The union team has repeatedly rejected this idea. Only retirees, who do not vote on a proposed tentative agreement, receive the insurance benefit. The union team wants to keep it. They cannot fathom telling the retirees they have given this benefit away. (low priority)

6. **Certified employees:** The union does not want the superintendent to be able to hire temporary or part-time certified teachers to save money, and thus wants to keep current CBA language which prevents the superintendent from doing so. The union feels the temporary/part-time proposal will eventually reduce and erode the union membership. (medium priority)
7. **Bereavement Leave:** The union has proposed to add "close friend" to the list in the current CBA, and to increase the number of days from two to three. One team member insisted the union propose these changes, but as president you largely view them as "throwaways". (low priority)

Table 3: **CONFIDENTIAL INFORMATION FOR THE SUPERINTENDENT: SEAN/SARA SAWYER**

The school board members chose to let you and Tom/Tina Savera negotiate with the union without any interference from the board members. However, you are well aware of the fact that while you have the support of the majority of the board, Savera has a few board members who are loyal to him and regularly and privately communicate with him. You are also keenly aware that Savera, while not blaming you for replacing him, would very much like to be re-appointed superintendent – which would be likely if you fail to get a new contract with the union, or you approve one that exceeds the budget. If at all possible you would like to reach a tentative agreement (TA) with the union today, rather than moving on to final-offer arbitration, which may cost the school system dearly if the arbitrator picks the union's final offer for settlement. The union could increase their final salary offer to a four or five percent salary increase just to see if the arbitrator would agree with them. In general, your team's general priorities and position on each of the remaining issues are:

1. **Salary Schedule**: The current projected budget for the next calendar year is $7.54 million, which includes $220,000 unspent and thus available for teacher raises, and $1,625,000 in the "Rainy Day fund" that is available for one-time expenses such as weather emergencies, capital expenses, etc. Last year the board spent $1.70 million from the Rainy Day Fund. Energy savings due to brand new lighting system are expected to save about $125,000 per year. A one percent raise for everyone in the system (union teachers, staff and non-union administrators) would cost $110,000. Your last offer to the union was a 3% salary increase but that would necessitate the elimination of the retiree insurance benefit ($110,000 in annual savings). If the retiree insurance benefit is not eliminated, then you will propose not giving a raise to the top two pay levels (teachers with 20+ years of service which would save about the same amount of money, $108,000, because the top levels include 45 teachers (no staff). You believe and have stated to the union that not giving increases to the top levels is justified because they are highly paid and will retire soon, while newly hired teachers, those in the lower pay levels, need the increase more. (high priority)
2. **Sick leave bank**: Savera has convinced you to propose the elimination of this benefit. He believes the control of the pool by a majority of union members makes it subject to unreasonable use. In addition, he thinks now is the time to eliminate this "perk" because teachers will not go to final -offer arbitration and risk losing the proposed pay increase of your final offer. Savera believes he has the teachers in "a corner" on this issue. (low priority)
3. **Grievance and benefit election forms**: The board members believe that administrative forms should not be part of the CBA because they need to be changed from time to time due to changes in laws, health care plans, etc. The board notes that a review of the three nearby school districts found none included these types of forms in their CBA's. (medium priority)
4. **Hiring decisions**: Several of the union's negotiating team members are upset because last year Savera hired a new teacher with only two years teaching experience, but eight years counseling experience. The new hire was placed on the MA salary schedule at the ten years pay level. No one disputes that the new hire has worked out very well. You and the board members strongly believe management needs to reserve the right to make similar hiring decisions for "hard to hire" positions (like math, science and technology teachers) in order to offer competitive salaries to applicants. The school is located in a small rural community and sometimes has had difficulty hiring these types of teachers. (medium priority)

5. **Retiree insurance benefit**: You have proposed to eliminate this benefit to generate $110,000 in annual savings which would free up the additional funds needed to provide a 3% salary increase to everyone. If you cannot get this concession, or save an equal amount of money elsewhere in the CBA, you can only agree to a two percent raise and stay within the budget. (high priority)
6. **Certified employees:** You want to be able to hire temporary or part-time certified teachers to save money, and /or be able to find "hard to hire" teachers. Thus you want to change the restrictive language in the current CBA. (high priority)

7. **Bereavement Leave:** The union has proposed to add "close friend" to the list in the current CBA and increase the number of days from two to three. The cost estimate to increase the number of days is $10,000 per year. The board is strongly opposed to any increases in this benefit. The cost of adding the "close friend" is unknown at this time. (medium priority)

Table 4: Tentative Agreement Form

Tentative Agreement

Between representatives of the
Wyatt Public Schools System and Wyatt Teacher's Union

1 Salary Schedule:
2. Sick leave bank:
3. Grievance and benefit election forms:

4. Hiring decisions:

5. Retiree insurance benefit:

6. Certified employees:

7. Bereavement Leave:

_____ _____ _____ ____

Union President **date** **Superintendent** **date**

DISCUSSION

The *Wyatt* case is a real world case in which the authors mediated the final settlement. All of the issues and facts presented are from the actual case, which gives it credibility with students. Students almost always ask for the details of the actual settlement. The settlement details are available from the authors: carrellm@nku.edu, or manchisel1@nku.edu. After many classroom student team negotiations, several conclusions about the case and students' performance can be provided: (1) students often reach the same settlement on at least a majority of the seven issues as in the actual case! ; (2) students quickly grasp the issues of the case with minimum instructions – possibly due to their experience in K – 12 schools, and they begin negotiating about 20-30 minutes after receiving the case materials. ; (3) students do not generally reach settlements that only favor either union or management – a very important attribute of the case. ; (4) the case includes both economic and non-economic issues which enables students to learn the differences between the two, and yet the importance of the two as well – similar to actual integrative negotiations. Therefore, overall, based on classroom testing, the case has proven to be an effective tool for teaching integrative negotiations!

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A New Career Strategies Course for Undergraduate Business Students

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ABSTRACT

Navigating the career landscape is becoming increasingly challenging. Career success requires our students not only to obtain their first job after graduation but also to self-manage their careers after graduation. This means that our students must develop and maintain business discipline-specific skills (accounting, finance, marketing), and career strategy skills, including how to understand and adapt to organizational culture, how to network, and how to build social capital with managers and mentors. This article presents a new course, Career Strategies, that was designed to help our students to develop the career strategy skills to successfully begin their careers after graduation. Included are the course fundamentals, including overall design, course description, learning outcomes, weekly topics, and assignments.

Keywords: course design, career strategies, experiential learning, oral presentation skills, networking

INTRODUCTION

Today's students are focused on job-related reasons for going to college, with 86% of incoming freshmen who indicate that getting a better job is a very important motivator in the decision to attend college (Eagan, Lozano, Hurtado, & Case, 2003). To help undergraduate students to obtain their first job after graduation, our business school created a professional development program that works in concert with the career development office to assist students to identify their career interests and to develop the needed skills in resume writing and interviewing. Career success, however, depends on much more than obtaining a first job. It requires business discipline-specific skills (accounting, finance, marketing), and career strategy skills, including how to understand and adapt to organizational culture, network and to build social capital with managers and mentors (Bridgstock, 2005; King, 2004). Additional career strategy skills include:

- creating career goals and identifying career paths and strategies to achieve these goals
- maximizing performance on the job by understanding and adapting to organizational culture
- defining and managing work-life balance
- developing skills to ensure inter-organizational mobility

Undergraduate students often have limited ideas about how to build a successful career and may not start to develop career strategy skills until after graduation (Perrone & Vickers, 2003). When developing such skills, they also need to take into account that the nature of careers has changed and that lifetime employment with a single organization has been increasingly replaced by boundaryless careers that involve movement across different organizations (Arthur & Rousseau, 1996). These boundaryless careers require the individual employee, rather than the organization, to plan and manage his or her career (Mirvis, 1996). To help students to launch their careers, we designed a new Career Strategies course to help our students to develop the skills to succeed in their first job as well as to help ensure their potential for future inter-organizational mobility and lifetime career success. The course works synergistically with our professional development program and career development office. These services help students to identify a career and find their first job, while the Career Strategies course helps to students meet early professional work challenges by learning how to find a mentor, by learning to build an effective relationship with their manager, and by defining and managing work-life balance in order to succeed in their first job and beyond.

THE COURSE

The course was designed under the direction of our Undergraduate Curriculum Committee, a college committee comprising representatives from each department of the business school that oversees the undergraduate curriculum. This committee helped to ensure that the course would be relevant for students who major in all of the business disciplines and that it addressed an unfilled need in the curriculum. To develop the course, we examined the career

development activities at other business schools. Most business schools provide career support, including counseling, career panels, and resume preparation through their career development offices (Wessels & Sumner, 2014). A few schools supplement career services programs with academic courses that help to develop career management skills. The George Washington University has a one-credit course, Career Management Strategy, that includes job search strategies and insights into transitioning to the workforce (The George Washington School of Business, n.d.). The Villanova School of Business has a four-year professional development program, required of all business students, that includes courses in resume development, interviewing, analysis and communication skills and professional and spiritual activities (Villanova School of Business, n.d.). The Rutgers School of Management and Labor Relations has an elective three-credit course that focuses on job search strategies and career stages and paths (Rutgers School of Business, n.d.). We also reviewed the academic research on careers and interviewed HR professionals from leading companies. Based on this input, two core objectives were established for the course:

1. To help students develop strategies to successfully begin their careers after graduation.
2. To enhance the ability of students to speak with confidence and effectiveness.

Oral communication skills were made a major component of the course because 85% of employers indicated that the ability to effectively communicate orally should be a top learning outcome for college students, and only 28% of employers indicated that recent college graduates were well prepared in oral communication (Hart Research Associates, 2016).

Course Description and Learning Outcomes

Based on the course objectives, the following course description was established:

> Career Strategies will help to equip students to successfully begin their professional careers. Students will examine the changing nature of work and its implications for their professional life. They will explore how to identify and adapt to organizational culture, how to build social capital, and how to cultivate work habits to maximize performance. Students also will have the opportunity to develop and enhance their oral communication skills.

Learning outcomes also were established. Upon completion of the course, students should be able to:

1. Develop a set of strategies to successfully begin their careers after graduation.
2. Speak with greater confidence and effectiveness.
3. Demonstrate an understanding of how to build social capital by adapting to organizational culture, building a strong relationship with their manager, obtaining mentors and sponsors, and engaging in workplace networking.
4. Create and assess career goals, career paths, and career strategies.
5. Recognize and address issues relating to work-life balance.
6. Develop strategies to enhance inter-organizational mobility.

Teaching Method

The course relies heavily on experiential learning. Readings and brief lectures help to prepare students for course assignments designed to help them think about career issues and to enable them to develop their own career strategies. The career strategy topics concern a variety of career issues, including navigating the changing landscape of careers, choosing a career path, networking, mentoring, building a strong relationship with one's boss, understanding and adapting to organizational culture, and cultivating habits for success. In addition, the weekly in-class presentations provide the opportunity to refine and develop oral presentation skills. The weekly oral presentations increase in complexity during the semester, beginning with simple communications, such as elevator speeches, progressing to brief informal presentations on class topics and assignments, and culminating with a formal presentation of the student's career strategy.

Mentoring also is an important component of the course. Immediately following each class, the instructor will conduct both individual and group mentoring sessions on topics related to career success. Each student will be required to attend at least one individual mentoring session and two groups of the six group mentoring sessions. During the individual mentoring sessions, students are able to discuss pertinent career issues of their choice. In the course pilot during the spring 2016 semester, students used these sessions to discuss career paths, work-life balance, the merits of attending graduate school, strategies for finding a job after graduation, and the challenges that they are

facing in their current employment. The individual mentoring sessions will typically last 20–30 minutes. Students will be encouraged to use the instructor's office hours to hold additional individual discussions. The instructor also will facilitate a number of group mentoring sessions on important career concerns, including strategies for finding and changing employment, maintaining an effective online presence, and negotiating one's salary. During these sessions, the instructor and the students will share insights from their experience and discuss career management challenges. The group sessions typically last 30–45 minutes.

Weekly Topics

The required text for the course is *The Career Playbook: Essential Advice for Today's Aspiring Young Professional* (Citrin, 2015) and is supplemented by readings from *The Harvard Business Review*. In addition, each week, topical readings from recent editions of leading newspapers and business periodicals are posted. Table 1 presents the topics covered during the course and the timing of the major assignments that are the building blocks for developing the student's final career strategy presentation.

Table 1: Topics

Date	Topics	Assignments
Week 1	Course introduction Changing landscape of careers Elevator pitches	*Career Playbook Introduction* Videos on elevator pitches
Week 2	Changing landscape of careers (continued) Networking	*Career Playbook Chapter 4* Videos on networking
Week 3	Career paths and strategies Making informal presentations	*Career Playbook Chapter 1*
Week 4	Discussion of Networking Assignment 1: Work-life balance	*Career Playbook Chapter 2* Submit and present Networking Assignment 1
Week 5	Work-life balance (continued) Body language Handling Q&As	*Career Playbook Chapter 3* Read handouts on body language and Q&As
Week 6	Discussion of Networking Assignment 2: Getting started and first impressions	*Career Playbook Chapters 10 and 11* Submit and present Networking Assignment 2
Week 7	Building a relationship with one's boss	Gabarro, J. J. and Kotter, J. P. (1993). Managing Your Boss. *Harvard Business Review.* V. 71, pp 150-157.
Week 8	Culture and diversity Presenting new ideas to one's boss	Caver, K. A. and Livers, A. B. (2002). Dear White Boss . . . *Harvard Business Review.* V. 80, No. 11, pp 76-83. Heath, K., Flynn, J., and Holt, M. D. (2014). Managing Yourself: Women, Find Your Voice. *Harvard Business Review,* V. 92, No. 6, pp 118-121. Williams, G. A. and Miller, R. B. (2002). Change the Way You Persuade. *Harvard Business Review.* V. 80, No. 5, pp 64-73.
Week 9	Discussion of culture assignment Diversity (continued)	Submit and present culture assignment Ibarra, H., Carter, N. M., and Silva, C. (2010). Why Men Still Get More Promotions than Women. *Harvard Business Review.* V. 88, No. 9, pp 80-85. Prime, J. and Salib, E. R. (2014). Inclusive Leadership: The View from Six Countries. *Catalyst* pp 1-16.
Week 10	Mentors Deliberate practice and lifelong learning	*Career Playbook Chapter 14* Colvin, G. (2006). What it Takes to be Great. *Fortune Magazine.* V. 154, No. 9, pp 19-22.

Table 1 continued on the next page

Week 11	Discussion of deliberate practice assignment Emotional intelligence and risk taking Presentation handouts	Submit and present deliberate practice assignment Goleman, D. (2004). What Makes a Leader? *Harvard Business Review.* V. 82, No. 1, pp 82-91.
Week 12	Resilience Career challenges	Coutu, D. L. (2002). How Resilience Works. *Harvard Business Review.* V. 80, No. 5, pp 46-56.
Week 13	Delivering a formal presentation Changing jobs and careers	*Career Playbook Chapter 12* Submit outline for career presentation
Week 14	Career strategy presentations	Make career presentations and submit PowerPoint slides and presentation handout
Week 15	Course wrap up	Prepare for class reflections discussion

Note: Beginning in Week 2, mentoring sessions are held after every other class session.

Major Assignments

There are five major assignments in the course: two networking assignments, a company culture assessment, a deliberate practice assignment, and the preparation and presentation of the student's career strategy. The first four assignments serve as building blocks or components of the final career strategy presentation.

Networking Assignment 1: Career Strategy and Career Path

Networking can help individuals to gain mentors and sponsors and to access information and guidance (De Janasz & Forret, 2007). This assignment helps students to practice their networking skills and to gain career insights through gathering information and writing a paper about what they can do after graduation to successfully begin their career. Students are prepared for the assignment through assigned readings and a class discussion on the subject of networking. During class, students discuss how they will network to find an individual with appropriate career knowledge and potential individuals with whom they might network. The instructor provides feedback on these networking approaches, and the final choice of networking strategy and contacts is left to the student. Students are given a list of items to explore during networking, including identifying the environmental trends that affect their future career, determining the skills that will be most important to develop during the early years of their career, considering what they need to learn about themselves to be successful and happy during the first five years of their careers, identifying ways to differentiate themselves from their competition, and determining potential career paths for their early career. Students share their insights in class by making a brief presentation about what they learned.

Networking Assignment 2: Job Satisfaction, Compensation, and Lifestyle

Students use their networking skills to obtain insight and feedback from at least three people who know them well as a means to think about the relative importance of job satisfaction, compensation, and lifestyle. Students are asked to think about the importance and meaning of the work that they hope to pursue, consider person-job fit and person-organization fit, consider how important it is to learn on the job and be challenged by their work, reflect on the importance of compensation and the impact of college debt on their career, and assess how working hours, stress, work location, and work-life balance might affect their desired career choice. The students submit a paper in which they share their insights and then make a brief class presentation.

Company Culture Assessment

For this assignment, students select a company where they might like to begin their career and then research the company to determine its corporate culture. Prior to the assignment, a class is devoted to how to identify and assess corporate culture. The instructor discusses how the students can use company websites, job and recruiting websites, and networking with current and past employees to identify and assess corporate culture. Students are asked to determine the culture of the company, including its norms and the expected behaviors of employees. In addition, students must describe the company's values, including the company vision for diversity and inclusion, indicate which values they find most important, and, finally, based on the company culture, explain how a new employee should behave during the first year on the job, including how to interact with fellow employees, management, customers, suppliers, and community members. The students submit a paper on their company culture assessment and make a presentation of key findings to the class.

Deliberate Practice Assignment

Deliberate practice, including planned training and effort, is essential to fully developing an individual's skills and abilities (Ericsson, 2004). For the deliberate practice assignment, students are asked to develop a plan to more fully develop a skill that will be important to their career success. To prepare for the assignment, a class session is devoted to the concept of deliberate practice. During the class, students are asked to discuss the insights gained from their first networking assignment in regard to the skills needed for success in their future careers. The instructor and fellow students provide feedback, and then each student chooses a skill for the assignment. After selecting the skill, the student prepares a paper that explains why the skill is important, indicates the specific aspects of the skill that the student needs to improve, and includes a deliberate practice plan with the steps the student can take now, while still in school, and, later, while on the job, to further develop the skill. Students submit the paper and make presentations of their deliberate practice plans to the class.

Career Strategy: Outline, Presentation, and Handout

This assignment provides the opportunity to synthesize the semester's work into a career strategy and has three elements: a presentation outline that will be used to prepare the presentation, an oral presentation that will be made to the class and that will be videotaped, and a presentation handout that provides a summary of the main points of the presentation. The presentation has three parts: an introduction, in which the student explains his or her early career goals; the body of the presentation, in which the student discusses how to differentiate him or herself from the competition, how he or she will build a strong professional network, and one or two additional strategies that the student plans to implement; and a conclusion, in which the student summarizes his or her strategies and then fields questions from the audience. To simulate an important business presentation, guest faculty are invited to attend the presentations and to serve as an audience.

THE LEARNING EXPERIENCE

This course was piloted during the 2016 spring semester, with excellent results. Students were enthusiastic about the course, and data from the IDEA student rating system used by the university indicate that the course is meeting its initial goals. Table 2 provides a summary of key feedback.

Table 2: Student Progress on Course Objectives

Describe your progress in:	No apparent progress	Slight	Moderate	Substantial	Exceptional
Gaining a basic understanding of the subject (methods, principles, theories)				25.0%	75.0%
Learning to apply course material to improve thinking, problem solving, and decisions				37.5%	62.5%
Developing skill in expressing yourself orally or in writing				37.5%	62.5%

Students suggested that, to further enhance the course, the professor should increase the number of mentoring sessions and involve the school's alumni in the course. Based on this feedback, increased focus will be placed on mentoring, and a LinkedIn group of current and former students will be formed to provide an ongoing student resource and to involve alumni with current students.

CONCLUSIONS

Undergraduate students often have limited insight into careers and may not develop critical skills that involve understanding corporate culture, engaging in professional networking, finding a mentor, and cultivating habits for success until after they graduate (Perrone & Vickers, 2003). The Career Strategies course was designed to help students to develop strategies to successfully begin their careers after graduation and to provide career skills that will facilitate inter-organizational mobility to enhance future career success. Due to the importance of oral communication to career success, the course also provides training to help students to improve their ability to speak confidently and effectively. Initial feedback from the pilot course has been positive, and after an additional year of

piloting, the course will become part of the required business school curriculum. Based on feedback from the pilot course, the assignments are well structured and can be used by other instructors to help students to identify career issues, cultivate career management skills, and develop an initial career strategy.

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What Do I Do with this Flipping Classroom: Ideas for Effectively Using Class Time in a Flipped Course

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ABSTRACT

Flipping the classroom is an increasingly popular teaching style, but converting a class to a flipped format can be challenging. Apart from creating or finding the external resources that will take the place of traditional lectures, instructors must also find ways to use classroom time. We describe ideas and suggestions for effectively using class time to improve students learning.

KEYWORDS: Flipped classroom, student engagement, mini-lectures, classroom activities

INTRODUCTION

Flipping the classroom (Hamdan, et al 2013) has become a major movement in academia. The flipped classroom (or inverted classroom, Lage et al 2000) has improved learning outcomes in a diversity of fields. Courses in general chemistry (Butzler 2016), communicative language (Spino & Trego 2015), engineering (Mason et al 2013), microeconomics (Roach 2014), and physiology (McLean, et al, 2016) have all shown improvements when flipped. These improvements include a deeper understanding of the material, increased topic-coverage speed, more content covered without reducing course quality, and improved test scores (Hamdan, et al 2013, Yarbro et al 2014). Flipping is an attractive option for both instructors and students for several reasons. First, it provides scheduling flexibility for both groups (Bergmann & Sams 2012). Second, it allows instructors to incorporate more technology into their teaching. Third, it allows instructors to increase their engagement with their students in class (King 1993 & Silverthorn 2006). Unfortunately, flipping also comes at a cost. Creating a flipped class requires a significant time investment (Spino & Trego 2015). Not only must the instructor create or identify the material students will use outside of class (e.g. video lectures, reading assignments, etc.), but he or she must also determine what will be done in the classroom (Dolan & Collins 2015).

For many instructors, the focus of their flipped course design is on creating or selecting the external resources students will use in place of a traditional in-class lecture. Given the propensity for students' minds to wander (Kane et al 2007), allowing students to read course materials or watch the lectures as series of videos helps retain student attention. Typically, instructors and resources on flipping focus on the time needed to create the videos and reading assignments, but these external sources are only half of the resources needed to successfully implement a flipped classroom. In order to be successful, an instructor must also carefully design the activities that will be done during class time (Spino & Trego 2015). This article attempts to help instructors effectively use their in-class time by discussing various in-class activities and how they can be incorporated into a flipped course. More specifically, we will discuss the use of several specific options for effectively using the scheduled class time: mini-lectures, group activities, active learning, and additional examples.

REMEMBERING THE TIME FACTOR

Before exploring the details of flipping activities, we need to address the "elephant in the room" regarding a flipped classroom: time demands. In designing a course, an instructor must carefully consider the time demands on the students. The tendency for many of us is to see open class time as a chance to add material to the course. Some instructors carefully select or create a set of videos that contain the important lecture information, then add new topics in class. The students in these classes must now watch a set of video lectures, then attend a set of in-class lectures, and still complete the homework and other projects in the course. For example, one of the authors added a new set of assignments to his course when he began flipping his classes. Even though most of the work was done in class, any student who had trouble with the concepts was then required to spend additional time outside of class finishing the new assignment, on top of the other assignments and projects already in the course as well as the video lectures that they were now watching. Another common mistake is re-teaching course material. Some instructors carefully select a set of videos that contain the important lecture information, then re-teach those same topics in

class. Unfortunately, many of us want to use the extra time to reinforce the material with our students, adding to the time demands of our course.

In designing a flipped course, the instructor should remember the basic principle behind flipping a classroom: students get the basic content outside of class where they do not need the instructor's help, then do the assignments and projects inside of class where they can get the additional help they need (Silverthorn 2006). A well designed flipped classroom will not add to a student's workload or time demands. It will instead shift the load so that the more difficult aspects of the course (i.e. actually applying the content) are done in class with the instructor. With that fundamental principle in mind, what activities are best used in class to help students learn more difficult concepts?

USING MINI-LECTURES

Re-teaching course material is not an effective use of time in a flipped classroom, but using a mini-lecture (5-12 minutes) to emphasize and discuss the key points in a set of videos or readings can be effective. The goal of these discussions should be highlighting and emphasizing the most important points in a set of material. These points can be the areas that past students have most struggled with, controversial topics that are worth debating during class, or jumping off points that lead into the rest of the activities for the day. Based on our experience with flipping the classroom, we recommend three options for effectively providing these mini-lectures.

The first options for providing a mini-lecture is to review a concepts or problem that the instructor, from past experience, knows will be challenging for the students. This option is essentially re-teaching one important idea to the students. For example, Figure 1 contains a basic slide about least-squares from a business statistics course. The instructor of this course knows that this concept, probably because of the equations, is difficult for the students to grasp, so he walks back through the equation with the students, asking questions and emphasizing again key ideas and methods before moving on to an example of the concept. Over time, this structure can develop into a strong class discussion as students realize that they can safely ask about this challenging idea and get their questions answered.

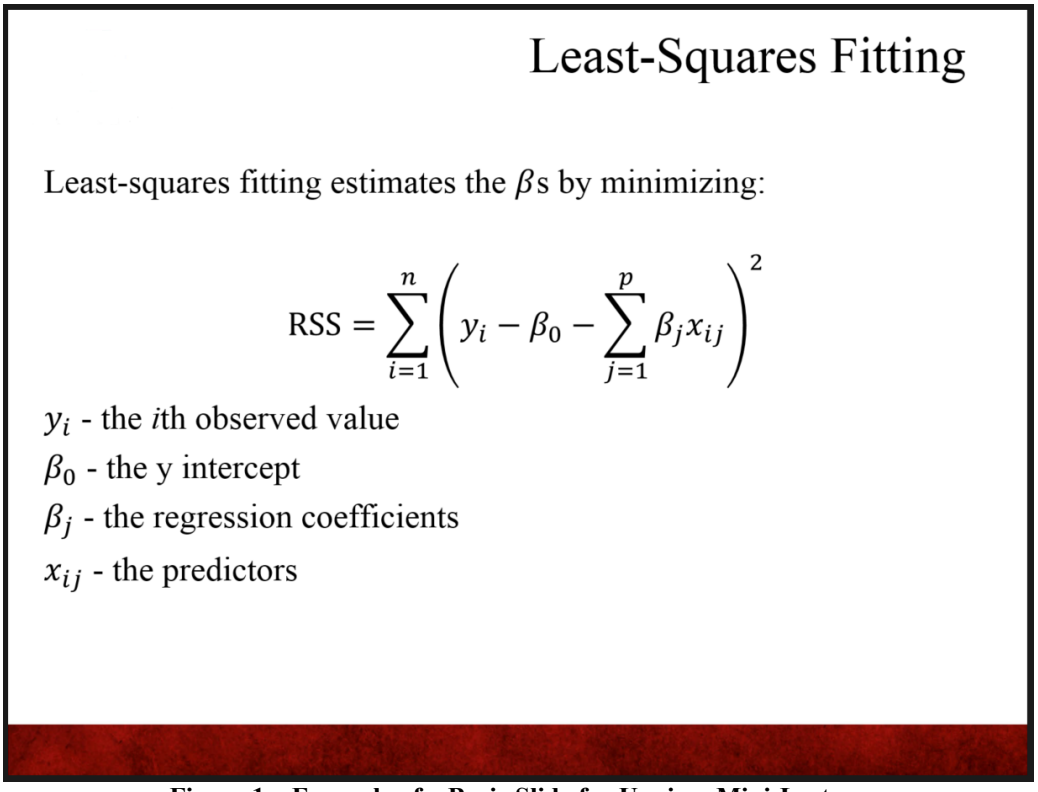

Figure 1 – Example of a Basic Slide for Use in a Mini-Lecture

The second option for providing a mini-lectures is to use a quiz or other small assessment tool to get students thinking about the videos they have watched or readings that they have done. While we expect our students to come

to class ready to go with the material read and videos watched, there are some that will avoid the work in the hopes that they can get the ideas and concepts from the mini-lecture. Using an assessment tool (quiz, group discussion, homework assignment, bonus question, etc.), encourages students to complete the outside activities so that they are ready for what we will do together during our class time. Having a quiz or other activity motivates students to watch the videos or do the readings, but it also creates a chance for discussion with students. Explaining a quiz after it has been submitted and analyzing multiple choice options (why they were wrong, what they mean, their importance as concepts, etc.) provides the perfect opportunity to emphasize key concepts in the material. The instructor is reviewing material, not teaching it, and then using the basic points to jump into additional discussion or activities. The only drawback from this style can be the pushback if students disagree with the answers to the assessment, but even the pushback can be used to emphasize key points and ideas.

The third option for providing a mini-lectures is to post a list of key ideas from the material that that students should have learned on their own. The instructor can then use the Socratic Method to help the class review the importance of the concepts on the list (Wood & Tanner 2012). For example, one of the authors lists key concepts for each chapter like the one in Figure 2. Since each concept asks the students to discuss, explain, or demonstrate an important concept from the recorded lectures, the instructor can ask the students to do those things in class. With the set provided in Figure 2, the instructor typically starts the discussion by asking the students to list the objectives of financial accounting, then moves on to similar questions about the other key concepts. As a side note, these key concepts can be embedded in the course lectures, giving students an additional motivation to watch the videos.

These discussions can branch out as the instructor wishes, covering additional material, walking through practice problems, covering recent events (so that he or she doesn't have to record new videos every semester), and providing emphasis to these important concepts.

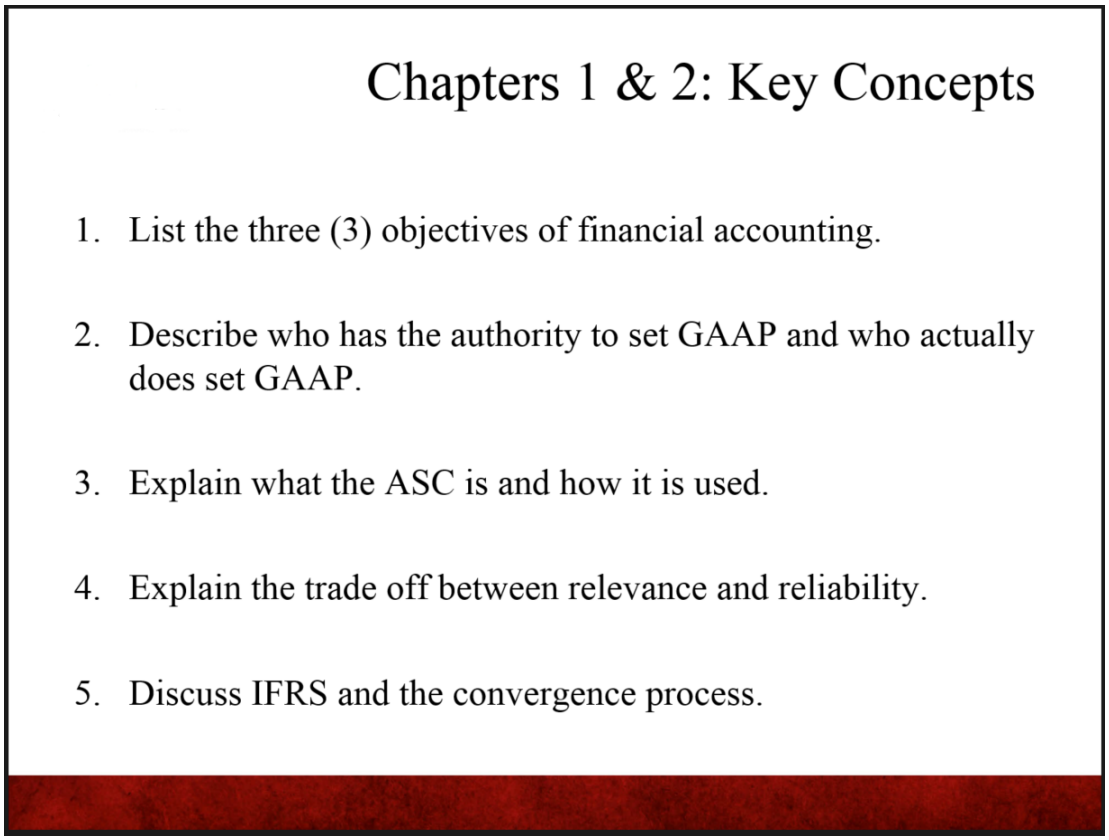

Figure 2 – Example Key Concepts for Use in Reviewing Chapter Material

Overall, the most important part of using mini-lectures is to keep them succinct. Remember that the goal is to emphasize and clarify, not expound and re-teach.

USING GROUP ACTIVITIES

One of the most powerful learning tools available is putting students into groups and letting them work together to solve problems, discuss concepts, and identify important ideas or questions. The process of discussing course concepts with each other helps to solidify those concepts and improve student learning.
With the time available in a flipped classroom, you have class time to do more with groups than you can in a traditional classroom. In fact, most of the instructors that we know who have chosen to flip their classrooms list the additional time for group work as one of the greatest benefit of the flipped method.

Group activities can take a number of forms, most of which are already commonly used. Students can work on projects or homework assignment together, can discuss or debate important concepts, can practice using software (or apps) that are important to the course, etc. However, we do have two suggestions for group activities that are especially appropriate for the flipped classroom and that have been very effective in our classes.

First, we give our students a list of questions about the concepts or methods they should have learned before class and let them answer those questions together. While some of these questions are focused on content (especially for students in lower division classes), we typically include more questions that focus on synthesis and evaluation: Why do we use this particular method? Why is this theory important? And why did this current development challenge existing standards? We've provided an example set of questions in Figure 2.

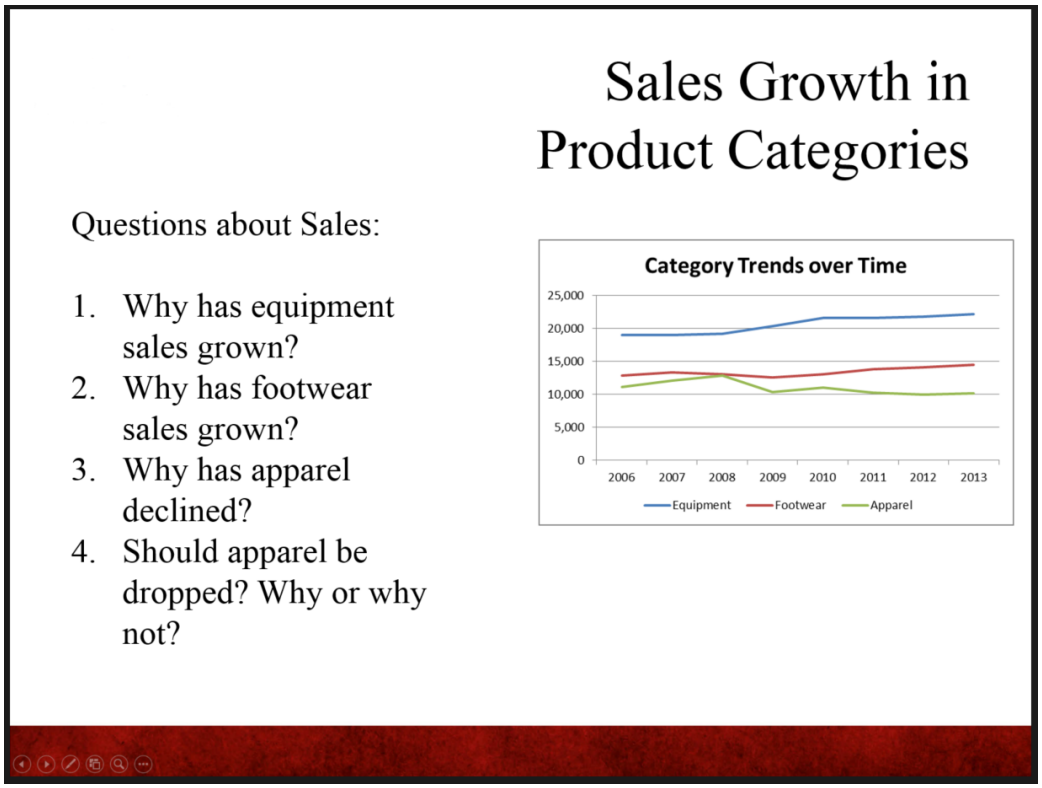

Figure 3 – Example Questions for Use in a Group Discussion

Second, we give groups or partnerships the opportunity to work on course projects during class (Prince, 2004). While most of us already use groups for big projects, there isn't much time in a traditional course for those groups to work together in class. In fact, one prominent student complaint about required group projects is that it is difficult to find a time to work together outside of class. In a flipped classroom, full class sessions can be dedicated for students to work on course projects, especially those that are done with a group. These sessions not only alleviate the challenge of finding time to get together, but it also allows the group to work where the instructor can observe their progress, assess participation, and answer questions.

ACTIVE LEARNING

Learning how to reason through a case (Ernst 2014, Barnes et al 1994), apply course concepts to a project, or use common business applications, such as the Microsoft Office suite, provides some of the most powerful experiences that we can give our students. While it is possible to walk students through cases, projects, and applications, these skills are best learned through active learning activities (Bigelow & Poremba 2014). However, the hands on nature of active learning can be frustrating without direct help from the instructor or teaching assistants.

The flipped classroom is almost tailor made for these kinds of activities. First, without the need to give an in-class lecture, instructors have time to demonstrate the use of a database, computer application or to walk through the methods needed to address a particular case. Second, the group dynamic created by other activities allows students to discuss their ideas and ask questions as they work together to learn the skills or solve the case. Third, the instructor's role as mentor instead of lecturer allows an open discussion of the steps needed to process a scenario of facts into a business decision or to learn a new program.

For example, one of the authors uses class time to walk his students through examples using Microsoft Access©. This hands on experience allows students to more easily understand the concepts in the information systems class, and provides them with skills they can discuss in interviews. Using these hands-on examples from the program helps students learn more rapidly. In addition, letting the students try to use the software on their own for a little while, then showing them the correct methods, improves student retention of the methods demonstrated and avoids the frustrations that students often feel when required to learn a program through trial and error on their own.

Another example is walking students through a complex analysis in a business statistics course. The instructor provides the students with a scenario asking them to select and perform the most appropriate analysis to give the manager the information needed for a business decision. After giving students time to work on each question with their neighbors, the instructor is able to discuss the correct answers with the class, making sure that everyone has selected the correct method before starting the analysis, then ensuring that the analysis is done correctly before they make a recommendation.

Without guided, knowledgeable, hands-on practice, students needlessly experience frustration when learning how to perform required tasks, especially when those tasks are moved from the classroom setting to a more "real world" setting in a case. Providing active learning opportunities in class bridges the chasm of failed comprehension and uninterested participation. Students leave these class sessions confident that they know how to use the tools and process the data into knowledge, and knowledge into better business decisions.

USING ADDITIONAL EXAMPLES

Perhaps the most common use of classroom time in a flipped course is to provide the students with additional examples that they can work on while the instructor is available to provide immediate feedback and answer questions. In fact, this was one of the original goals of the flipped model, because one of the weaknesses of a traditional in-class lecture model is that students are practicing new concepts outside of class with limited access to the instructor.

The most common method for using additional examples is to move the cases, course homework and projects into the classroom, but it is not the only option. One alternative is to create a new set of problems or examples that students can complete during class. These examples can be similar to those used in the readings or video lectures, or they can push students to take the next step in learning the concepts.

One author uses about one class day a week to work with his students on a series of practice problems. These workshop days include both types of examples. The most common examples are from topics that the instructor knows from past experience are challenging for the students. These examples are based on those questions most commonly missed on exams or from the questions most commonly asked during office hours in previous semesters. The other examples, typically one for each workshop, are problems that were discussed conceptually during the video lectures, but not demonstrated. For example, when discussing leases in an accounting class, the videos demonstrate the methods for a lease with a bargain purchase option (i.e. the right to buy the asset at the end of the

lease at a reduced price) and the in-class example will ask students to work through a lease with a guaranteed residual (i.e. the lessee promising to return as asset at a certain value at the end of the lease period or make up the difference in cash) instead.

Another example of pushing students to take the next step would be to walk students through an example in the lectures of how to set up a marketing plan for a brand new product, then to ask students in class to set up a marketing plan for a product that will need to gain market share in a market with several other products. Students are typically frustrated with a homework assignment or exam that pushes them beyond what was covered in the lectures or readings, but doing these problems in class, with a group, and with the instructor providing feedback and help as needed makes it into a learning opportunity. From our experience, the students appreciate the chance to see the alternatives not covered explicitly in the lectures.

Another alternative to traditional homework is the use of bonus questions. One author found that students were putting off watching the videos for a given topic until immediately before the quiz on that topic. To help students spread out the videos, and therefore retain more of the information, he posts a bonus question at the beginning of class based on the concepts from the videos scheduled for that day. Bonus questions can also require students to do a little research on their own, such as reading an additional article, searching the news articles on the topics being discussed, or examining a 10-k or management letter for examples of how real companies are using the methods discussed in the course. These examples can be used as the basis for a discussion, but more importantly they push students to do some additional reading or research on their own. One other benefit to using bonus question is that students are motivated to earn the bonus points, and at the same time grateful for the opportunity, as opposed to being frustrated by one more assignment. Two examples of bonus questions we have used are provided in Figure 4.

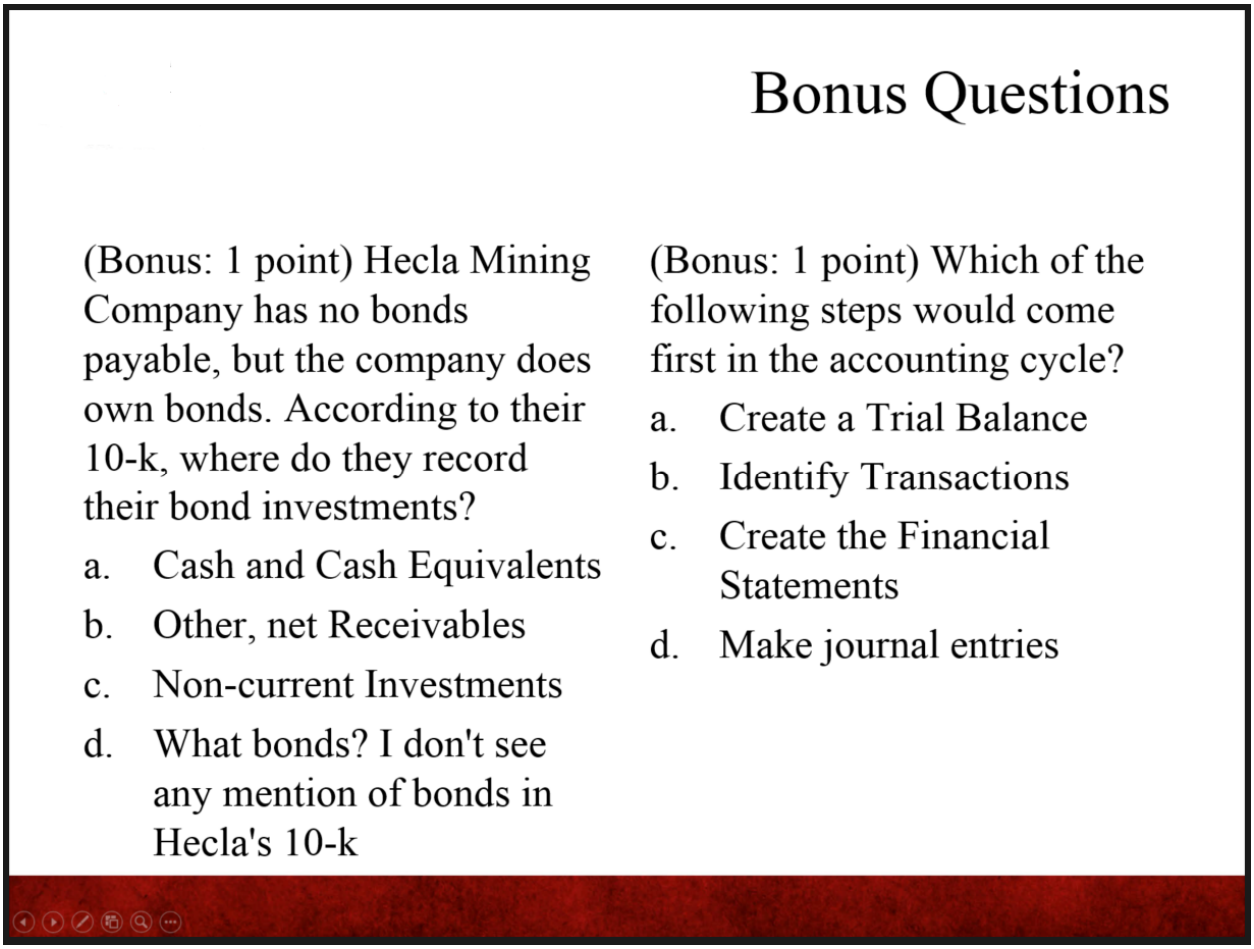

Figure 4 – Examples of Bonus Questions for Use as Additional Examples

In adding examples, keep in mind that you don't want to increase student workload significantly beyond what it would have been in a traditional course. Keeping the examples ungraded or making them extra credit will accomplish the same goal of teaching students without adding additional pressure. If students don't take the example seriously without a grade, then we recommend finding a "light" method for offering a grade. For example, one author posts a 3-point participation question after every workshop that he completes with his students. The questions are simple, fill-in-the-blank type questions that ask for one of the numerical answers covered during the workshop discussion. If students have participated in the discussion, then they already have the number in their notes. If they chose not to attend or didn't listen to the discussion, then they won't have the right number, thus providing the necessary incentive to keep students engaged without becoming burdensome.

CONCLUSION

The flipped classroom provides powerful opportunities to interact with our students as mentors when compared to a traditional classroom format. Our class sessions, if used effectively, can become the greatest learning experiences in our courses, because students will be discussing, applying, practicing, and asking questions about the basic content in our readings or video lectures. In addition, they can be rewarding opportunities for instructors to provide the one-on-one teaching moments that allow us to actually connect with both our students and the subjects that we love. The key is to focus on activities that push student learning without increasing stress, thereby providing students with genuine knowledge.

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Using Media Clips with the Visual/Virtual Generation: We are Doing it Backwards

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ABSTRACT

A large body of research shows that today's visual/virtual graduate and undergraduate higher education students grasp class concepts best by relating them to visual sources such as TV shows, movies, YouTube and other media and media clips. The traditional college classroom approach, when incorporating media and media clips, positions the instructor as the active participant who finds, selects and presents clips as part of the course experience. The author follows an alternative methodology which has the students taking the active role - selecting the course related topic, finding the appropriate media clip, and presenting same to their classmates. This technique was compared across graduate and undergraduate college classes, and as an individual learning versus a group learning assignment, using business, government and non-profit courses and materials: the result - a clear preference for student selected media clips – led to improved student awareness and understanding of course concepts.

Keywords: TV, film, movies, media, video, clips, college, teaching approach, graduate, undergraduate, higher education, individual learning, group learning, business, government, non-profit, YouTube

INTRODUCTION

The purpose of this article is to compare the use of instructor selected versus student selected media clips in expanding graduate and undergraduate student awareness and understanding of course concepts. Following a background section that discusses visual media and individual versus group learning, the article's purpose, methodology and results are presented. Tools used to employ this student-driven technique such as Media Clip Assignment guidelines, a sample Media Clip handout and a Media Clip rating sheet are included as Samples at the end of this article.

BACKGROUND

As we continue into the 21st century, it is not just our class materials that must evolve, but our methods as well, as we seek to keep pace with our changing students. For most of us in academia, there are few pleasures greater than a peaceful moment reading a good book. However, for most of our students today, reading a good book (or anything else for that matter) is more a chore than a pleasure. They have grown up as watchers, not readers. Today's technology has only enhanced the "watching" approach to life. As far back as 1986, Gioia and Brass called their current students the "TV Generation" and noted how they were the first generation raised on a solid diet of visual images. Twenty plus years later, Proserpio and Gioia (2007) have seen the continued evolution of our students beyond just a visual generation; they have become a 'Virtual" generation as well, adding the online world of the internet as a source of their primarily visual information and entertainment.

If we are to engage our students on their turf, we need to look for ways to increase our use of additional media in our classes. We can successfully combine visual media with reading and lectures in the classroom (Hinck, 1995). Specifically, it is possible to increase student learning, interest and motivation by using TV shows, films, or other clips (Addams, Fan, & Morgan, 2013; Badura, 2002; Boyatzis, 2002; Gee & Dyck, 1998; Harrington & Griffin, 1990; Kirsh, 1998; Raingruber, 2003; Roskos-Ewoldsen & Roskos-Ewoldsen, 2001; Taylor & Provitera, 2011). Champoux has repeatedly described using pre-selected film clips to show highly visual and dramatic topics involving ethics and moral reasoning (Champoux 1999, 2006) and for topics in management education (Champoux 2001a, 2001b). There is a large body of literature spanning four decades (e.g., Anderson, 1992; Bolt, 1976; Boyatzis, 1994; Burkley & Burkley, 2009; Christopher, Walter, Marek & Koenig, 2004; Conner 1996; Doris & Ducey, 1978; Eaton & Uskul, 2004; Fleming, Piedmont, & Hiam, 1990; Roskos-Ewoldsen & Roskos-Ewoldsen, 2001; Smith, 1994; Toman & Rak, 2000) that shows the advantages of using films and television shows in the classroom as well as various techniques for their use.

While some TV and movie characters we select may seem quite dated to our students, they nonetheless do reflect the cultural values, norms and viewpoints from a given time (Johns, 1992; Vande Berg & Trujillo, 1989). For

example, over the past twenty years we had Serey (1992) who used *Dead Poet's Society* to show leadership. Baker (1993) used The Karate Kid and Huczynski (1994) used *The Magnificent Seven* to illustrate issues of power and motivation. Ross (1996) found an escalation matrix in *The Age of Innocence*. *Other People's Money* showed corporate restructuring (Graham, Pena, & Kocher, 1999). Harrison & Akinc (2000) used various clips on leadership. Comer (2001) used *The Lion King* to show leadership and role conflict. While Hunt (2001) expanded on the value of TV shows in the class, *Seinfeld* was used to show psychological systems (Dent, 2001). Mallinger & Rossy (2003) looked at culture in *Gung Ho*. *The Insider* was used by van Es (2003) to teach ethics. Bumpus (2005) used various films, and Livingstone and Livingstone (1998) used *Twilight Zone: The Movie,* to show diversity issues.

At the same time, according to Proserpio & Gioia (2007) and Alavi, Yoo, & Vogel (1997), students find it more difficult to think logically and develop critical thinking skills solely from *instructor based* information. It should be noted that all of the work above was based upon the traditional approach of having the instructor/author choose and present the media clips for his/her courses. Furthermore, although our visual/virtual students of today (the internet culture of students described by (Gackenbach, 1998)) can "find" most anything on the Internet, being able to "Google" any topic, at the same time they are not always able to distinguish the validity of what they find, or more often, the lack thereof (Graham & Metaxas, 2003). It would seem that providing more effective learning for the virtual generation requires a more active problem solving focus (Alavi, 1994; Johnson & Johnson, 1975).

Combining this active search type of learning, the use of media clips, and a problem-solving focus, Tyler, Anderson and Tyler (2009) wrote about the benefits of requiring students to search and find media clips to illustrate management concepts in their business courses. Their primary focus was on the value of having their students actively 'find' the media clips themselves rather than having the clips preselected by the instructor. They observed that engaging the students in this way "results in a richer and more active learning experience that is likely to help students better understand and retain the materials." They listed three benefits from this approach:

1. For the students themselves to research and select appropriate media clips, they must more thoroughly understand the concepts they are presenting.
2. For the instructor, the perennial task of finding media clips that are interesting to the students and effective learning tools is shifted from the instructor to the students.
3. Finally, since the clips are aimed at the students as the target audience, they are in a better position to know what is being seen by their peers and then to find and select clips that are relevant to them than we are as instructors.

Using a constructivist approach to teaching and learning is also advocated by Fosnot and Stewart Perry (2005). Fundamentally, constructivism says that people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences. Thus, the best learning occurs as students are actively involved in the process of constructing their own meaning and knowledge as opposed to passively receiving information. Having students review, reflect upon and select their own media clips, and then present and defend their selections to their peers is highly active and constructionistic.

Proserpio and Gioia (2007) also advocate the value of social interactions and activities to facilitate the learning process. This yielded a fourth benefit to Tyler: By working in groups, the students must brainstorm and experience working collaboratively to identify possible clips, and then review and select the best clips. The benefit to working in groups in general was also highlighted by Richard Light, who assessed the learning of Harvard undergraduates. Light (1992) reported that freshmen who chose at least one small-enrollment course reported a significantly better educational experience than those who did not, but he also found that for larger classes, dividing students into small groups of between four and six students to work on substantive topics had a major positive result. "The payoff," he says, "comes in a modest way for student achievement, as measured by test scores, it comes in a far bigger way on measures of students' involvement in courses, their enthusiasm, and their pursuit of topics to a more advanced level" (p. 70).

PURPOSE

The purpose of this research was to answer the following questions:

- Could this approach of using media clips in the classroom be considered acceptable and beneficial, using business, government and non-profit courses and materials?
- Was there a difference between using instructor supplied media clips as compared to those found by the students themselves?
- Does this approach work with graduate as well as undergraduate students?
- Is there a difference in perceived effectiveness between students performing the task of finding media clips as a group versus as individuals?

Historically, this author as instructor has regularly used instructor-selected media clips in many of his classes across all management topics, so this was a natural extension of current teaching practices.

METHODOLOGY

Over the course of three years, the author utilized the Tyler et al (2009) technique in a series of courses offered through the College of Business and Public Management at Kean University. These were management courses in which initially no media clips were used; during the last three years only instructor-selected media clips had been presented. In total there were four undergraduate management principles courses, and six information management courses-two undergraduate and four graduate - for a total of ten altogether.

Table 1: Description of Course Section Conditions

# of Sections	Key	Definition
2	GG	Graduate Group
2	GI	Graduate Individual
3	UG	Undergraduate Group
3	UI	Undergraduate Individual

In half of the courses, students were divided into groups of four to six students. In the remaining sections, students were left to work as individuals. In each class the author began the semester by presenting a full overview of the semester's coursework including each week's core topics and readings.

For the first three weeks, classes were conducted without media. In the fourth week, the use of media clips to illustrate a specific topic from each class was introduced by having an Instructor Selected (IS) media clip presented in class. A handout was prepared for each class which provided the source and a paragraph summary of the clip as well as a detailed summary of the specific topic. The handout was presented to the class before showing the clip. Each student was also provided with a rating sheet and asked to rate, on a 7 point scale, how well he or she felt the clip illustrated and supported the topic. In addition, students were to write a detailed paragraph explaining their rating. These sheets were then collected at the end of the class. This process was followed in weeks five thru nine, for a total of six weeks. A copy of the Rating Sheet is shown as Sample 1.

For the next six weeks of the semester (weeks ten thru fifteen), all students in all sections were required to choose a Student Selected (SS) topic scheduled to be covered, either as a group (UG/GG) or as individuals (UI/GI). In all cases students would have to find a media clip of three to seven minutes in length that they felt illustrated their topic, and prepare an accompanying handout to accompany their presentation of their clip in class. A sample Media Clip Handout is shown as Sample 2.

In the interest of sensitivity, all students were to avoid the use of materials containing excessive profanity, graphic sex and/or violence. They were asked to warn the class before showing a clip if they thought there might be any objectionable materials, thus allowing any classmates to sit out any such clips. After each clip was shown, the students/groups were then rated by the class using the ratings sheets.

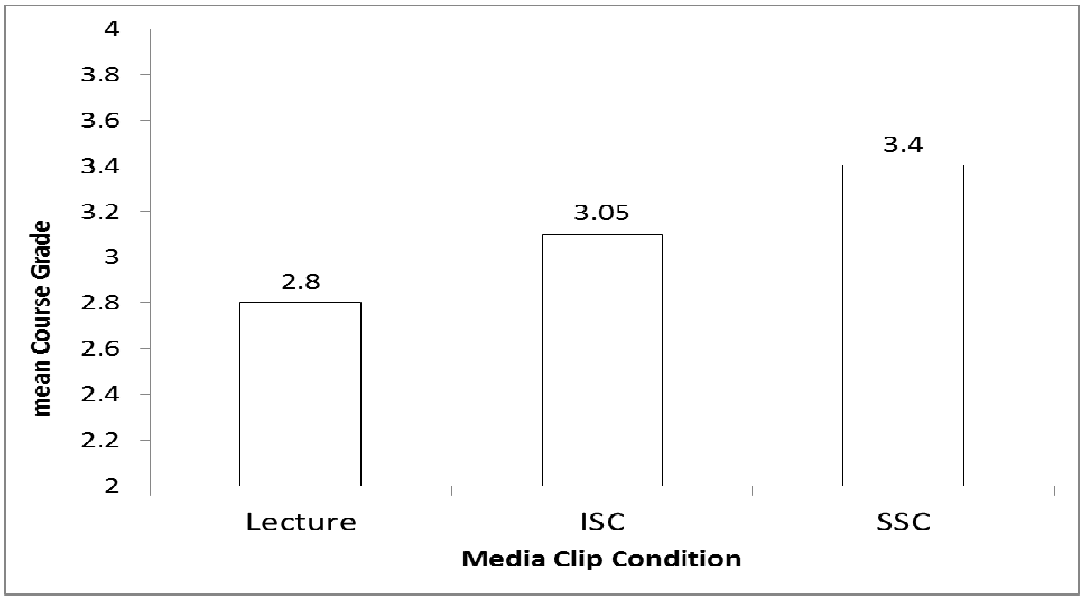
The main overall logistical issue for the instructor was to keep track of each class topic and to ensure that no two students/groups in the same class chose the same topic. Each student/group had to email their topic selection in advance, on a first come first choice basis. Based on the number of students per class (approximately thirty each), two to three individual students presented per week (UI/GI classes). The groups, typically six to eight groups for each class (UG/GG classes), were required to do two clips in the semester. This worked out to two to three clips shown per week as well.

At the end of the semester, students were asked to write a memo on their experience in finding and presenting their own clips, either alone or as a group, in comparison to using instructor selected clips. Further, they included their thoughts on the impact the clips had on their overall class experience and their opinion on using media clips as a way to learn about class topics.

RESULTS

In discussing the results of this work, the first focus is on the student learning outcomes, measured in traditional ways including papers and examinations and summarized in course grades. When comparing the scores and grades of students in earlier sections of these courses that did not use any media clips with those that used only IS clips, there was a small but not statistically significant gain in the latter sections. When comparing the lecture/no media clips to IS clips to SS clips, there was a significant gain in SS clips class grades over no media/IS clips, significant at the .01 level.

Graph 1: Mean Course Grades by Section: Media Clip Condition



We know from the above that the use of media clips in our classes in general increase measured student learning outcomes. But it is the second focus of this work that is most important. Bored students don't learn as well nor do they *enjoy* learning as well as engaged students do. Our task is to continue to find new and better ways to engage today's students to not only learn in our classes but to want to continue learning.

As Tyler et al (2009) had pointed out, we instructors have a limited knowledge of what might serve as a useful classroom clip and likely lean a bit heavily on the 'classics'. To broaden things as much as possible, the student

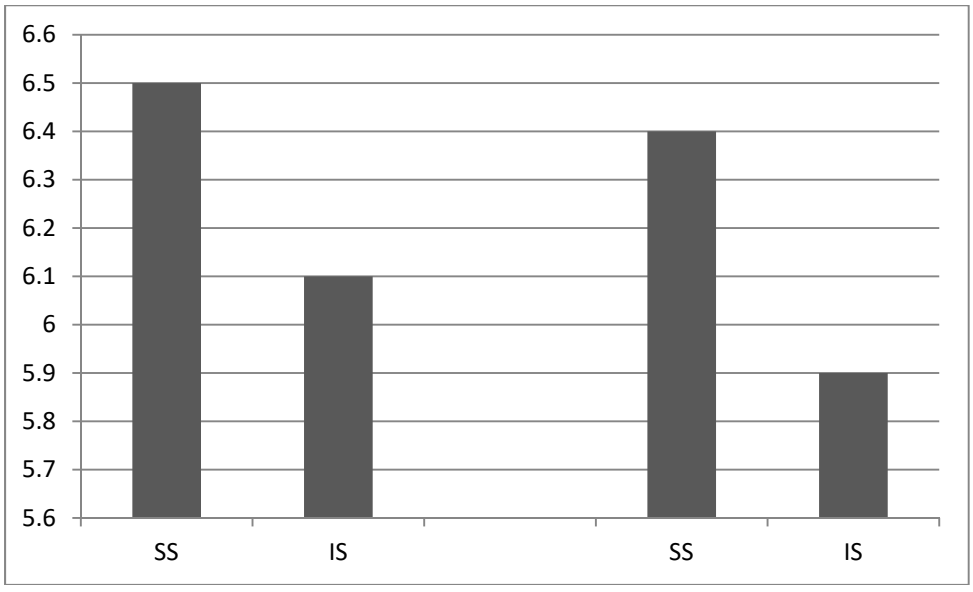
guidelines thus simply refer to "media clips." Over the course of the semester, while many clips shown did come from movies and TV shows familiar to the author, well over 60% were clips from sources he had never seen or heard of before.

One of the recurring themes reported by the students as part of the end of semester memos was that the assignment brought out what might be called 'perceptual acuity'--students reported that they would start to see particular class topics "popping up" in the most unlikely places. This was reflected in the clips themselves, which came from not only the usual entertainment sources but also commercials, sports and even organizational training materials. These results were constant across all four combinations (UI/UG/GI/GG). Another point gleaned from the memos was that this perceptual acuity applied not only to their own topic but to the class topics overall, with many students telling of having seen a 'better' clip for a given topic than was shown in the class, or of how in their most recent trip to the movies etc. they saw this and that topic "popping out" at them in something they watched. Students who may have expected this to be an 'easy' assignment found their peers to be strong critics. Any tendency towards using clips simply for their entertainment or 'shock' values was quickly shot down by their peers, who categorized them as 'time wasters' etc. The numbers of so-called "questionable" (profanity/sex/violence) clips were few and far between.

While each section of each class at the University undergoes an independent student evaluation using ETS® Student Instructional Report II (SIRII), an additional independent evaluation of each student in my courses was conducted for each media assignment to have them evaluate their opinion of the two media clip conditions, instructor selected and student selected.

The overall rating for this assignment by the students was quite favorable. On a 7 point scale of how well they thought the clip illustrated the particular topic, the UI classes averaged a 6.1 favorable rating for IS media vs a 6.5 for SS, while the UG classes averaged a 5.9 score for IS media vs 6.4 for SS.

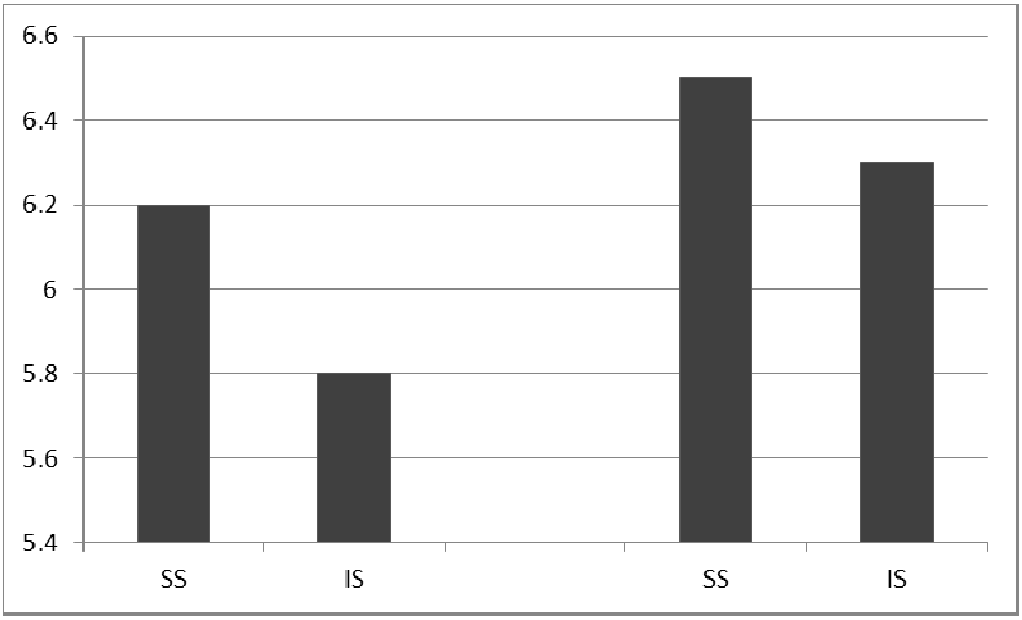
Graph 2: Undergraduate's Ratings Student Selected SS vs. Instructor Selected IS Clips in Individual and Group Settings



Individual **Group**

The graduate course results were quite similar: Individual projects Instructor Selected clips 5.8 vs. Student Selected clips of 6.2, and Group projects Instructor Selected clips of 6.3 vs. Student Selected of 6.5.

Graph 3: Graduate's Ratings Student Selected SS vs. Instructor Selected IS Clips in Individual and Group Settings



Individual **Group**

Comparing the variable of working as individuals versus working in a group, the undergraduate students preferred working alone while the graduates preferred working in groups; however all combinations rated selecting their own media to being superior to using instructor selected materials. Thus, student selected video materials were rated more favorably than instructor selected clips in all conditions, working alone or in groups, undergraduate or graduate.

In their explanation paragraphs about each clip, as well as their 'end of semester' memos about the assignment, all sections at the graduate and undergraduate levels across the board reported that they were very positive about watching videos and media as part of their school work. Perhaps the greatest value of the assignment came from helping students develop the ability to link their everyday visual, virtual world with their school world. For the vast majority of students, school is an island apart from the rest of their existence. Having them define for themselves a learning objective from school, and then finding and defending same from their *other* world, linked not only these two separate parts of their lives but also their visual and writing skills in ways they had not done before. The overall rating of the assignment for all classes was also 5.9 out of 7.0 for media clip appropriateness/class value.

Class discussions about the assignment with the graduate students did bring up its own interesting point. Many of the graduate students were currently functioning as managers in their organizations and they recognized that they often had a hard time reaching out to their younger workers. They saw this technique as a good way to bridge the gap between themselves and their 'visual/virtual' juniors, allowing the workers themselves to find a clip and in doing so becoming active learners.

CAVEATS

The graduate students, who were on average more than a decade older than the undergraduates, had little trouble writing about their topics or describing their clips. They did however struggle more with the technological aspects of the assignment—e.g. finding, saving, and showing their clips—and they sometimes agonized over the

'appropriateness' of a clip from more current sources. They also were most likely to use clips from more traditional sources of television and movies as well as news. For both groups, the age range was 18-52 years of age, M UG =21.7yrs and M GR =38.3yrs.

Some words about the technology issues encountered are warranted. The two main ways in which students could 'bring' their clips to class were either on a flash stick or via email. While the flash sticks were commonly utilized by most students, both as a back-up or just for ease of use, many students would email themselves a link to their clip which they would access using the class computer and projector. YouTube was the most common source of clips. Some students would edit their clips from other sources, upload them to YouTube and then email the link to show in class.

For some of the older students, both flash sticks and YouTube were a bit of a challenge. A couple of the younger students in the graduate classes held an impromptu session on finding, saving, and showing media clips for their fellow students. This did not seem to be an issue in the undergraduate sessions, where there were greater struggles in connecting modern laptops and tablets with older classroom projectors and other equipment.

There was the expected occasional conflict over issues of equal team member effort etc., but for those readers wishing to try this assignment themselves, particularly in larger classes, it worked as well with groups as it did with individuals. Note in this case however as with all group work, it may be easier for some students to avoid the challenge of the experience when they do not have to do it entirely on their own.

CONCLUSION

Student comments on sourcing their own media clips were generally quite positive:

- "The clips brought the concepts alive; I don't really get that much from flat words on a page."
- "Having to find my own stuff kept me on top of the topic. I wanted mine to be better than anyone else's."
- "Once we got started [with finding our own clips] whenever I was watching anything I kept seeing stuff and getting excited, thinking, 'Wow that would be great for class!'."

Finally, there were no differences in results between the courses themselves; that is, the Management Principles and the more technical Information Management courses yielded the same positive overall results and same superiority for Student Selected media over Instructor Selected and the same positive results found in the original research. In my University, media clips are a staple in almost all disciplines and courses across the Business College. I believe that having student's research and select the clips used is the more successful strategy for us all.

According to Scherer and Baker (1999), 'Film [TV and other media] provides a familiar attention-capturing visual medium to engage the student and encourage retention' (p. 143). Combined with the new virtual world of today, this visual/virtual world allows every one of us to explore a truly unlimited horizon. Today, using the internet, we as well as our students can go anywhere, see anything, and search anything in the past as well as the present. At the same time, as much as we strive to use relevant 'new' materials with our students, no one of us, student or instructor, can uncover all the best possible media that tie into our courses. By shifting the responsibility onto our students to go out and uncover their own media clips, we not only open ourselves to seeing (and sharing) things we would never have found on our own, but also broaden our students' perspectives to a new way of seeing the world around them. This technique links our visual/virtual students of today with our more traditional analytical approach in the classroom. When we help our students look for and perceive the lessons of the classroom in the bigger world around them, we heighten their perceptual acuity and help to transform them from passive watchers to active learners.

While enrolled in a graduate program in College Teaching and Administration, the author had the opportunity to not only read but attend lectures by K. Patricia Cross, then a Professor of Higher Education, Emerita at the University of California, Berkeley and one of the leading scholars on adult learners in the college/university environment. Dr. Cross often spoke about the need to reform the ways in which we help adults to learn, ways that are different from those of children; hence her use of the term andragogy rather than pedagogy.

Dr. Cross wrote (1998) about the combined benefits of student initiated learning and small group work. "Thus, when students negotiate their own understandings by actively working to understand others' contributions and to fit them

into what they already know, they develop a network that is called, in modern learning theory, a *schema,* which is a kind of cognitive map that permits new learning to become understanding by making connections to what the student already knows. Small interactive peer-group learning is more likely than a lecture or a textbook to make the connections that students need to develop a more complex schema, offering more links to accommodate new learning. It also expands the schema to the larger picture that lies beyond individual perspectives (p. 10)."

The techniques examined here are easy to use, with multiple benefits to both undergraduate and graduate students. The process of bringing in media clips, generated by the students themselves, combines the best andragogical practices with the latest technologies our students know and use. It works well across a broad range of course topics and subject matter and can be used in individual or group work. Since we know that our students, like ourselves, benefit from learning in ways that are felt to be engaging and enjoyable, using student selected media clips greatly enhances the student's perceived overall value of using media in our classes and provides a superior way to connect with our students than our more traditional non-media clip approaches. Of course, after this, our students may never see things as "innocently" as they did before, as each new self-generated discovery of a classroom concept in the visual/virtual world around them leads to yet another discovery, and another, and another in an endless chain.

If we can inspire our students in class to begin searching for and seeing our class lessons in the media that is all around them, it is a short step for them to begin seeing such lessons on their own. At the point they begin bringing the clips to us and each other in and out of the classroom, we may well have a new, modern illustration of life-long learning.

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Sample 1. Media Clip Assignment Guidelines

They say a picture is worth a thousand words so a TV, movie or other media clip must be worth even more. As we have talked about in class, scenes from various media can be used to illustrate topics we cover in the course. Now, instead of me finding and bringing examples to class, it is your turn. Whether you are working as an individual or a group:

You begin by selecting the topic from class that you want to study. You then email me that topic for me to review; partially to make sure it fits in the class and partially to make sure that no one else is doing the same thing. Then, once you hear back from me you begin to look for a media clip that you think works to illustrate your class topic. This 3 to 7 minute clip can be from a movie, a television show or anything else you think works. Next, get a copy of your clip to show in class and write a one page handout for the class about your topic—what is it, and then describe it; next tell us about your clip, what is it and how does it illustrate your topic. You have between now and Sunday 5pm to send me your proposed topic. I will be showing you a sample clip and providing you a sample handout next week.

Note: Since there is an infinite amount of materials out there from which to choose, please avoid any clips containing excessive profanity; graphic sex and/or violence. If you think your clip has any sensitive or objectionable materials, please warn your classmates before showing your clip so anyone who wishes to can sit out anything that might make them uncomfortable.

To send me your topic you **must** follow this format.

1. Send me an email

2. In the subject line put “Media Clip Topic”

3. In the body of the email:

    A. your Name

    B. your Class and Section number

    C. in one sentence or less tell me what topic you want to study

    D. in one paragraph or less tell me how this topic fits in to your class/text etc.

4. Wait for me to reply to your email

5. Once you get the OK, go find your clip and write your handout

Sample 2. Sample Media Clip Handout

Your Name, Management 3990-01

Topic: Charismatic Leadership

The **Charismatic Leadership Style** was one of three leadership styles described by Max Weber (1947) along with bureaucratic leadership and traditional leadership styles. The charismatic leadership style is based on a form of heroism or extreme of character where you become leader by inspiring others.

The characteristics of the charismatic style include:

- Leaders are viewed as having super powers and abilities, the leader is viewed as a hero by followers
- Leaders are followed because of personal trust and the charisma the leader exhibits
- Followers are promoted based on personal charisma they exhibit
- There are no formal offices of authority, power is gained through social skills

The Charismatic Leader gathers followers through dint of personality and charm, rather than any form of external power or authority. Charismatic Leaders pay a great deal of attention in scanning and reading their environment, and are good at picking up the moods and concerns of both individuals and larger audiences. They then will hone their actions and words to suit the situation.

Charismatic Leaders who are building a group, whether it is a political party, a cult or a management team, will often focus strongly on making the group very clear and distinct, separating it from other groups. They will then build the image of the group, in particular in the minds of their followers as being superior to all others. The Charismatic Leader will typically attach themselves firmly to the identity of the group, such that to join the group is to become one with the leader. In doing so, they create an unchallengeable position for themselves. In my film there is a scene where the crew does not want to go where Flynn wants so he quits as leader, they then realize they would rather follow him into danger rather than go without him to safety.

Movie Clip-- Errol Flynn as Captain Blood 1935

http://www.youtube.com/watch?v=9BDiNhe_YNQ

My clip is a 5 minute compilation from the film Captain Blood based on the true story of Dr. Henry Pittman who was arrested and sold into slavery in the West Indies in 1685. Even with very little dialog the 5 minute overview shows Flynn's charisma in binding together and becoming the leader of the slaves as they rebel against their colonial overlords and fight not only their former masters but other pirate outlaws who prey on the weak. Much of Flynn's success as a swashbuckler can be seen as the natural charismatic leadership he displayed in motivating people around him to follow him, such as in Robin Hood where he gets the men of Sherwood Forrest to join him in fighting against Prince John on behalf of the people, but it all started here, with his first film, Captain Blood.

Sample 3. Media Clip Rating Sheet

_____ _____

Your Name, Course Management 3990-01 Date

Class Topic: _____

Presenter(s): _____

Media Clip: _____

For this media clip, please rate it based upon *your* perception:

This clip does a good job of how well it illustrates and shows the class topic it is supposed to cover.

Not at All			Somewhat			Very Much
1	2	3	4	5	6	7

For this clip, please tell me what you think is particularly good or bad about the clip in terms of how good a job it does and why in helping you too see and understand the class topic:

Integrate Video-Based Lectures into Online Intermediate Accounting II Course Learning

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ABSTRACT

Student engagement is very crucial to the learning effectiveness no matter if it is an online or traditional in-classroom face-to-face teaching delivery method. By integrating video-based lectures into an online Intermediate Accounting II course learning, the instructor could make a difficult and challenging advanced accounting course a little bit easier for students to understand. This paper makes a contribution to accounting education literature by discussing the effectiveness of video-based lectures into the online advanced accounting course learning.

Keywords: Accounting Education, Online Education, Course Effectiveness

INTRODUCTION

Online education has been growing at a very faster speed in recent years at almost all post-secondary education levels (Fisher 2003). Online education provides students the benefits of flexible time management, cost savings at traveling, a good balance of personal and professional life (Salimi 2007; Shanahan 2003). But how to measure an online course learning effectiveness remain an area that is needed to be investigated more.

In recent years, accounting firms are more willing to hire accounting graduates who have some online accounting course work (Grossman and Johnson, 2015). With the marketability of accounting degrees and the growing demands, more accounting courses are offered online. One of three main issues related to online accounting education is how to assess the learning quality and outcome of the online education experience in an accounting course (Bryant et al., 2005). Chen et al. (2012) compares the learning effectiveness of online accounting education to traditional in-class face-to-face teaching delivery. Their results suggest that the traditional classroom environments could generate more favorable learning effectiveness and outcome in advanced accounting courses than online delivery mode. The delivery method, no matter if it is online or traditional in-class face-to-face teaching delivery, is not very important in introduction-level accounting courses (Chen et al., 2012).

Intermediate Accounting II course is an advanced accounting courses, which is the part two of Intermediate Accounting course in accounting curriculum. Since Intermediate Accounting II Course is a major class required by most accounting programs in U.S., it is very important to understand how to improve learning quality and outcome in an online delivery setting. This paper makes a contribution to accounting education literature by discussing the learning effectiveness of video-based lectures into advanced accounting course in an online learning environment.

APPLICATIONS OF VIDEO-BASED LECTURES

The author uses the application of video-based lectures in an online Intermediate Accounting II class in spring 2016. The 15th edition of Intermediate Accounting with 2014 FASB Update, by Kieso, Weygandt and Warfield, is used at this online Intermediate Accounting II course. This online Intermediate Accounting II course has 29 students and most of them are non-traditional students.

Intermediate Accounting II course is a continuation of Intermediate Accounting I course. It covers a variety of very comprehensive and advanced financial accounting topics, such as dilutive securities, basic and dilutive earnings per share, leasing accounting and pension accounting (Kieso et al. 2014). These important topics are also included into the current and future Certified Public Accountant (CPA) exams even though there are some changes at CPA exam effective on date of April 1, 2017 (AICPA, 2016; Whittington, 2015).

Astin (1984) defines the engagement as "the amount of physical and psychological energy that the student devotes to the academic experience". The cookie cutter approach, such as the use of publisher slides without any changes to

fit specific student groups or body's interests, cannot be very helpful when instructors are dealing with executive MBA students with complex needs and a variety of studying interests (DeBoskey, 2009). Sargent et al. (2013) find that the use of ultra-short 3-minute online videos, a learning innovation, could help students with poor academic performance in principles of accounting courses to have a better class grades and become more confident in passing the class.

Hornik and Thornburg (2010) examine the effectiveness of the use Second Life™, a 3-D Multi-User Virtual Environment (MUVE) created by Linden Laboratories, to integrate an interactive accounting equation and t-account model into first-year financial accounting course. The use of Second Life™, as a virtual learning tool, can demonstrate a positive relationship between student engagement and performance into first-year financial accounting course (Hornik and Thornburg, 2010). Dunbar (2004) indicates that a combination of Flash examples, audio and video files and other learning tools does increase student satisfaction based on the student surveys. In Dunbar's 2004 study, the combination online course learning method is used into a graduate-level tax accounting course, an advanced online accounting course. Premuroso et al. (2011) find that the use of Audience Response Systems (ARS), "whereby the instructor poses questions related to the course material to students who each respond by using a clicker and receiving immediate feedback", has a significantly positive impact on the student examination performance in the introductory financial accounting course. The implementation of interactive learning tool in the classroom, such as Audience Response Systems (ARS), increases student engagement and then student satisfaction (Premuroso et al., 2011).

Porter and Tiahrt (2016) report there are four methods to create video lectures for a course. Method one is "using videos from another source", such as YouTube™ and videos provided by the publishers. Method two is "recording your classes". Method three is "recording studio-style lectures". Method four is "recording lecture segments". All four methods have their own pros and cons (Porter and Tiahrt, 2016). The author chooses the method two to record the whole class period because the author teaches a same face-to-face classroom-based Intermediate Accounting II class at the same semester. It is a best-fit way to provide the same contents for two classes.

Canvas, an online course management system, is used in the author's online Intermediate Accounting II class. Panopto recording, a video-recording software and tool, is embedded into Canvas to record all video lectures to match the following course objectives and student learning outcomes described in table one. Panopto is a very powerful and easy-to-use screen capture software program with many user-friendly functions, including the feature to record all audio and video components on instructor's computer screen (Dorff, 2016). Panopto can also be used to organize and edit the video files.

The classroom is equipped with two cameras to capture the activities of the instructors and students. The author only uses one camera to capture the instructor's activity. There are two windows on the platform of Panopto recording software. One window is linked to camera to capture the instructor's activity, such as the handwriting on the whiteboard. The second window is used to connect to a computer screen or document camera to capture the instructor's class notes and handout demonstrations.

Porter and Tiahrt (2016) suggest that it requires a lot of preparations and planning to create videos for an online course. The author spends significant time to play with all software programs, adjust the angles of camera to capture the right place of the whiteboard, and practice many times in the same classroom to examine the effects of some self-tested small video clips. To choose a good equipment also plays an important role in creating high-quality videos. The author tests out both internal and external microphone and finds out the external microphone works great with the Panopto recording function. In order to allow external microphone to capture high-quality audio, the instructor has to stay close to the podium, where external microphone is put.

Khanlarian and Singh (2013) investigate the relevant factors to affect student performance in Web-based homework (WBH) online learning environment. Students' frustration with software related to the use of WBH online learning environment has a negative impact on student performance (Khanlarian and Singh, 2013). To avoid the potential students' frustration with technology, all lecture video links on Canvas are listed in the order of chapter sequence in this Intermediate Accounting II class. It is easy for student s to browse through all videos under Modules on Canvas in order to reduce the students' frustration with technology in an online learning environment.

Table 1: Course Objectives and Student Learning Outcomes

Course Objectives:

- Learning to apply accounting material to improve thinking, problem solving, and decisions.
- Learning fundamental financial accounting principles, methods, and theories.
- Developing specific accounting skills, competencies, and points of view needed by accounting professionals in the field most closely related to this course.

Student Learning Outcomes:

- Students will be able to apply accounting principles to solve intermediate-level financial accounting problems
- Students will be able to demonstrate the analytical abilities and critical thinking skills applicable to business decisions and solutions.

*Course objectives and student learning outcomes are based on the IDEA Survey, which is used to measure the course learning effectiveness at the author's university.

By practicing worked example assignments from the textbook, students could strengthen the remembering and understanding of the relevant accounting concepts, theories and methods (Halabi et al. 2005; Tan et al. 2013). End-of-Chapter Problems from the textbook are required as homework to submit on Canvas electronically. Then the instructor would use these examples on the whiteboard in video-recorded lectures and post all videos on Canvas.

The instructor sends out a short survey to 29 students in this online Intermediate Accounting class at the beginning of the semester. One question is "What is the best time length for each online lecture video for this class prepared by the instructor"? 24 out 29 students respond to this question on the short survey and the response rate is 83%. Among 24 respondents, 46% of students prefer to have 50-minute lecture videos. 21% of students prefer to have 40-minute lecture videos. 29% of students prefer to have 30-minute lecture videos. Only 1 student prefers to have 20-minute lecture videos. Based on this feedback, the author records all lecture videos in the range of 30-50 minutes.

At the end of semester, the IDEA Survey, a university-level course evaluation tool, is conducted for this online Intermediate Accounting II class. 26 out 29 students respond to all questions on the survey. The response rate is 90%. The use of video-based lectures to increase student engagement was well-received. Some evidence of learning effectiveness can be noticed through the descriptive statistics report of some selected data from IDEA survey in table two to four and the qualitative reports in table five.

Table 2: Descriptive Statistics of Some Selected Data Related to Students' Perception of Their Instructor's Teaching Procedures

	Hardly Ever-1	Occasionally-2	Sometimes-3	Frequently-4	Almost Always- 5	Mean	Standard Deviation	Total Responses
Demonstrated the importance and significance of the subject matter								
Percentage	0%	3.85%	7.69%	34.62%	53.85%	4.38	0.79	
No. of Students	0	1	2	9	14			26
Made it clear how each topic fit into the course								
Percentage	0%	7.69%	0%	34.62%	57.69%	4.42	0.84	
No. of Students	0	2	0	9	15			26
Explained course material clearly and concisely								
Percentage	4%	0%	8%	31%	58%	4.38	0.92	
No. of Students	1	0	2	8	15			26

In general, table two shows that students have a very positive perception about their instructor's teaching procedures. Among 26 respondents, 58% of students describe their perception of instructor's ability to "explained course material clearly and concisely" as "Almost Always", the highest rank in 5-level scales. 31% of students describe it as "Frequently", the second-highest rank in 5-level scales. Overall, the average value is 4.38 and the standard deviation is 0.92.

To integrate video-based lectures into online Intermediate Accounting II course learning definitely helps students feel more confident about the challenging class materials because students can repeat watching instructor's lecture videos as many times as possible.

Table 3: Descriptive Statistics of Some Selected Data Related to Students' Description of Their Progress

	No Apparent Progress-1	Slight Progress-2	Moderate Progress-3	Substantial Progress-4	Exceptional Progress- 5	Mean	Standard Deviation	Total Responses
Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)								
Percentage	0%	0%	23.08%	34.62%	42.31%	4.19	0.79	
No. of Students	0	0	6	9	11			26
Learning to apply course material (to improve thinking, problem solving, and decisions)								
Percentage	0%	0%	15.38%	46.15%	38.46%	4.23	0.7	
No. of Students	0	0	4	12	10			26
Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course								
Percentage	0%	0%	11.54%	42.31%	46.15%	4.35	0.68	
No. of Students	0	0	3	11	12			26
Learning appropriate methods for collecting, analyzing, and interpreting numerical information								
Percentage	0%	0%	19.23%	30.77%	50%	4.31	0.77	
No. of Students	0	0	5	8	13			26

Table three demonstrates that students have a very positive description about their progress in this online course. Among 26 respondents, 46.15% of students describe their progress on "developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course" as "Exceptional Progress", the highest rank in 5-level scales. 42.31% of students describe it as "Substantial Progress", the second-highest rank in 5-level scales. Overall, the average value is 4.35 and the standard deviation is 0.68.

Among 26 respondents, 50% of students describe their progress on "learning appropriate methods for collecting, analyzing, and interpreting numerical information" as "Exceptional Progress", the highest rank in 5-level scales. 30.77% of students describe their progress as "Substantial Progress", the second-highest rank in 5-level scales. Overall, the average value is 4.31 and the standard deviation is 0.77.

Table four indicates that not all students feel very confident about this very difficult advanced accounting course at the beginning of the class period. The mean score for the statement that "when this course began, I believed I could master its content." is 3.85 on a 5-point Likert scale with a score of 5 indicating strong agreement with the statement. Only 5 out of 26 respondents choose the highest rank in 5-level scales, "Definitely True", when answering this question. But at the end of the semester, students have an extremely positive view about the course. Among 26 respondents, 50% of students choose "Definitely True", the highest rank in 5-level scales, to answer the question of "overall, I rate this course as excellent". 27% of students choose "More True than False", the second-highest rank in 5-level scales. The mean score for the statement that "overall, I rate this course as excellent" is 4.27 on a 5-point Likert scale with a score of 5 indicating strong agreement with the statement.

Table 4: Descriptive Statistics of Some Selected Data Related to Students' Perception of the Course

	Much Less than Most Courses-1	Less than Most Courses-2	About Average-3	More than Most Courses-4	Much More than Most Courses-5	Mean	Standard Deviation	Total Responses
Difficulty of subject matter								
Percentage	0%	0%	46.15%	30.77%	23.08%	3.77	0.8	
No. of Students	0	0	12	8	6			26
	Definitely False-1	More False than True-2	In Between-3	More True than False-4	Definitely True-5	Mean	Standard Deviation	Total Responses
When this course began I believed I could master its content.								
Percentage	0%	3.85%	26.92%	50%	19.23%	3.85	0.77	
No. of Students	0	1	7	13	5			26
Overall, I rate this instructor an excellent teacher.								
Percentage	0%	0%	7.69%	34.62%	57.69%	4.5	0.64	
No. of Students	0	0	2	9	15			26
Overall, I rate this course as excellent.								
Percentage	0%	0%	23.08%	26.92%	50%	4.27	0.81	
No. of Students	0	0	6	7	13			26

Table 5: Qualitative Reports of Student Comments

Student Comments –*
• "As a distance student, I really appreciate him posting lecture videos so we get the full experience even without being on campus."
• "Did a fantastic job of bringing the online students into the classroom, by posting his lectures."
• "The recorded lectures- especially going over the homework problems, and the notes posted on canvas were very helpful for understanding the material! Thanks for a great class!"
• "I love that he posts videos so that you can see him doing the problems. It makes you feel like you are in class, without the annoyance of it :)"
• "His videos were very helpful and informative."
• "Strength: Having videos of lectures in the class."
• "Strenghts - Very informative class videos."
• "Strength: taping lectures, Weaknesses: this should never be an online class"
• "The strength of the course was the lecture videos."

*from the IDEA Survey, which is used to measure the course learning effectiveness at the author's university.

Student comments about video-based lectures in table five provide some qualitative evidence to show video-based lectures in an online advanced accounting course could increase student interests and student engagement in the class materials.

RESEARCH LIMITATIONS

One major problem for this research is that IDEA survey is a university-controlled assessment tool. As an instructor, the author only gets a summary report instead of a more detailed dataset, which really restricts the author from doing further basic and comprehensive statistical analysis.

Second major problem for this research is that there is no control group to test the learning improvements. This on-line course is only offered one time in every two years at the author's institution. We don't know if a same advanced accounting course without the integration of video-based lectures would have resulted in similar student responses

and learning effectiveness. Based on the requests from some students in this online class, the author has to provide all lecturing videos on online course management system from the beginning of the semester. As a result, the author does not have a chance to see if students could do better before and after the video-based learning method is adopted.

CONCLUSION

Student engagement is very crucial to the learning effectiveness no matter if it is an online or traditional in-classroom face-to-face teaching delivery method. By integrating video-based lectures into the online Intermediate Accounting II course learning, the instructor could make a difficult and challenging advanced accounting course a little bit easier for students to understand. Future research might be done in other advanced accounting courses to examine the learning effectiveness of video-based lectures and the impact on the learning outcome at other advanced accounting courses in an online learning environment. A more quantitative method can be used to do further analysis.

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Facilitating Team Projects in the Online Classroom: Enhancing Student Team Effectiveness

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ABSTRACT

This paper aims to discuss a best practices exercise for facilitating team projects in the online classroom and enhancing the internal environment of the team-building process. The implications are particularly valuable to enhancing the effectiveness of team-based projects. The paper includes a brief overview of the significance of using team-based projects in the classroom, a description of the exercise, and a discussion of the experiences from professors currently using the activity.

Keywords: Team projects, Team effectiveness, Online education, Online classroom, Team building process, Internal team environment, Shared leadership, Cohesion, Virtual team

INTRODUCTION

Effective team work is necessary for businesses to remain competitive and innovative (Gardner & Korth, 2010) and allows for improvements in quality, speed, and customer satisfaction (Andrews, 1995). Business schools are constantly pressured by organizations to have a greater emphasis on interpersonal and team-related skills (Gardner & Korth, 2010; Porter & McKibbin, 1988). As professors, it is our obligation to provide a quality education and enriched learning experience that meet the demands of the business workforce (Gardner & Korth, 2010). As proposed by Francis and Young (1992), for teams to be effective, team members must understand their roles, have the necessary processes in place, and build relationships that allow for the giving and receiving of feedback. Achieving these goals can be difficult in the classroom – particularly in an online environment – however, with the proper tools, instructors can be more effective in creating productive team experiences.

The vast growth and interest in online courses as an educational medium present both opportunities and challenges for higher education (Grandzol & Grandzol, 2006). Business schools are forced to face the pressures of reaching this market and expanding their distance-learning opportunities while facing the demands of maintaining quality instruction and academic integrity of the curriculum (Gardner & Korth, 2010). The transition from traditional face-to-face classes to virtual (online) courses requires that new instructors be hired to lead the new course sections or for current faculty to develop new sections deliverable in a virtual context. Because the dynamics in online course vary from that of face-to-face classrooms, the need to understand best practices for online instruction becomes paramount to achieve desired learning outcomes (Grant & Thornton, 2007).

While leading a course in an online environment may present challenges, introducing team-based projects and team-building exercises may introduce further challenges given the idiosyncrasies of the online environment. According to Grandzol and Grandzol (2006), "recognizing online education's potential it is important to identify best practices and establish standards that assure quality, comply with accrediting bodies, support faculty initiatives, and provide business students with a product that leads to a satisfying and wholly worthwhile learning experience." The exercise discussed herein provides students an opportunity for a valuable, team-based learning experience by focusing on enhancing the internal team environment, which leads to enhanced shared leadership, cohesion, and overall team effectiveness.

Overview of the Exercise

The exercise consists of two parts. (A version of the full exercise is presented in the appendix.) For Part 1, students are asked to create a team charter and engage in a "fun" activity together. The team charter requires students to create guiding principles for decision making, resolving conflict, and ensuring overall team progress. The team charter includes pertinent topics such as a mission statement, code of conduct, communication plan, project deadlines, conflict resolution, team goals and team structure. When developing the team charter, emphasis is given for the teams to consider how each member's contributions will be considered and how various ideas and suggestions will be managed.

Also in the first part of the exercise, the students are also asked to "do something fun," and post a description on the course webpage. In an online course, this task may seem difficult at first, especially for students in diverse geographic locations, but the assignment does not require the team members to physically be present together. Rather the students must identify an activity they would all enjoy, with each individual taking a picture completing the task and sharing those images as a team. Many teams find creative ways to merge their photos online and even more creative activities to participate in the activity as a team. For example, students who choose to eat pizza all take photos of themselves at their favorite pizza restaurants individually and then post their pictures on the course page. Dialogue with the pictures is often about their local pizza place, favorite toppings, or what style of pizza is prominent in their region. Students find engaging ways to participate and often post photos from athletic events, art and cultural events, dining experiences, and an array of other activities.

The second part of the exercise offers students an explanation as to why each task was required. Specifically, students were asked to create a team charter in order to develop a "shared purpose" among team members. Further, each team was asked to decide how to incorporate ideas and suggestions from each member to ensure each member had a "voice" in the team. Finally, the "fun" activity was assigned to develop social support among the members. These three components (shared purpose, voice, and social support) are the dimensions of internal team environment.

In this second part of the exercise, a discussion is held to describe why internal team environment is important and why it is important to actively engage in team tasks and take leadership roles early in the team-building process (Katz & Kahn, 1978). Students are also informed that research demonstrates that internal team environment directly influences shared leadership (Carson, Tesluk, & Marrone, 2007) and cohesion. Additionally, shared leadership and cohesion are found to influence team effectiveness (Daspit, Tillman, Boyd, & McKee, 2013). Part 2 of the exercise helps students make the link between theory and practice.

CONCLUSION

Overall, we have received consistently positive feedback from this team-based exercise. Throughout the project, and course, we have recognized greater student engagement in the team-based exercise, as well as other individual assignments and course activities. In the online courses, students are more active on course wikis, discussion boards, and other interactive communication tools (particularly student-to-student communication). Students have engaged in greater interaction among their team members, reducing complaints about a single team member loafing or not participating. From course evaluations, we have recognized an increase in overall satisfaction with the course and team-based exercise in both face-to-face and online sections. With the leadership roles being shared, students take greater pride in their work, showing more responsibility and accountability for their project grade. We have also recognized greater creativity in the team-based projects and excitement in using various forms of technology to complete their tasks throughout the project.

In addition to this being an exercise that results in positive implications for group-level phenomena and outcomes, this exercise is also an example of how to apply theory to practice. Business schools are criticized for lacking critical components that help students link theory and practice (Pfeffer & Fong, 2002). This exercise is designed to first engage students in a practical exercise (Part 1) prior to explaining that the exercise is based on theory (and theoretically proven relationships). This offers students a "real life" example of how to apply theory to practice, and it provides the instructor a foundation from which to build upon in subsequent theory-driven lectures.

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APPENDIX

Team Orientation Assignment: Initial Exercise

Goal #1: Create Team Charter

Team charters are helpful in providing a set of ground rules for managing the team's progress. Team charters can include a mission statement, rules for governing, details on how decisions will be made, etc. The first objective of this assignment is for each team to create a team charter. When creating your team charter, be sure to discuss how the team will work together to *ensure individual contributions are considered*. It is advised that each team should include a clause in the charter to describe *how ideas and suggestions will be managed*. Also, be sure to specifically state the goals of your team. When complete, all members must sign the team charter and submit a copy.

Recommended Components of the Charter

- Mission Statement and Team Objectives
- Team Process Management
    - Meeting Management: Meeting schedule, agendas, expectations, attendance, functional roles
    - Communication: Handling team communication, ensuring the ability for all to contribute
    - Decision Making: Decision procedures (vote?), conflict resolution plan
    - Tasks: Task assignment process, consequences of unsatisfactory and/or untimely contribution
- Performance Measurement
    - Assessment of Team Effectiveness: Achievement of team goals, timely completion, effectiveness working together, peer evaluation forms

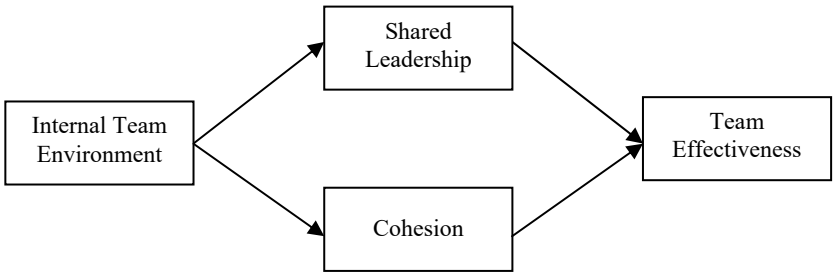
Goal #2: Have Fun

The second objective of this assignment is for all members of your group to get together and do something fun. (Yes, you should have fun!) Your group should plan some sort of social activity for all members of your team. For example, you may have dinner, meet for coffee, go bowling, go to a movie, go to a sporting event, etc. It's your choice. *Be creative!* At the event, have someone take a picture. Your team will then submit the picture on our course page. Note: You do not have to physically be in the same location to complete this activity. For example, your team may decide to all have pizza. Go to your favorite pizza location and be sure to get a picture. Then post or merge your pictures on our course page and discuss the experience with your teammates. What style is your pizza? What are your favorite toppings? Do something creative, something you all would enjoy!

Team Orientation Assignment: Follow-up Exercise

*Now, the rest of the story…*The original objectives of this assignment were for your team to (1) create a team charter, and (2) have fun! However, the underlying purpose of the activities was to enhance your team's internal environment early in the team-building process.

A strong *internal team environment* produces a context that encourages members to take leadership roles and actively engage in team tasks (Katz & Kahn, 1978). Internal team environment directly influences shared leadership (Carson, Tesluk, & Marrone, 2007) and cohesion, and internal team environment is shown to indirectly influence team effectiveness (Daspit, Tillman, Boyd, & McKee, 2013).



Without realizing it, you and your team were enhancing the internal environment of your team. To enhance the internal team environment, research recommends focusing on three components: shared purpose, voice, and social support (Carson et al., 2007).

Shared Purpose. Shared purpose exists when members have common goals and work together to achieve goals of the team (Carson et al., 2007: 1222). To accomplish this, your team was advised to create a *team charter*, which incorporated your team goals.

Voice. Voice describes the extent to which individuals feel as though they can contribute to the team by recommending changes (Hirshman, 1970). When creating the team charter, your team was asked to discuss how members will work together to ensure *individual contributions are considered*.

Social Support. Social support is the extent to which a person feels cared for, valued, and part of the team (Kirmeyer & Lin, 1987; Sarason, Levine, Basham, & Sarason, 1983). Building a solid social base in a team from the beginning is important for later success. To do this, your team's assignment was to *do something fun*.

Overall
This assignment *applied theory to practice*. It was designed so that your team built a solid internal team environment using all three components (without consciously thinking about it). When working with teams in the future, you may consider focusing on these three components to enhance the internal team environment and positively influence the effectiveness of the team.

**This exercise may be used with written permission from the authors and if citation to this article and authors is made on the exercise.

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Employer Assessment of Information Systems Internships Based upon Student Perception of the Employer's Support

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ABSTRACT

This paper presents an analysis of survey responses resulting from a questionnaire submitted by employers of student interns and another questionnaire submitted by the student interns. The employer survey contains fourteen questions rating the interns on a ten point psychometric scale while the student survey contains five questions rating the employers' support of the internship on a five point psychometric scale. Employer and student surveys are completed independently of one another so that employers don't know the ratings of their interns and the interns don't know the ratings of their employers. A Pearson correlation matrix provides strong evidence of positive and significant associations among employer survey responses and student survey responses. One-way between subjects ANOVA calculations are generated to compare the effects of the fourteen individual employer responses on the five responses contained in the student survey rating the students' perceptions of employer support.

Keywords: internships, survey analysis, ANOVA

INTRODUCTION

The Metropolitan State University of Denver is a state supported university located in downtown Denver. The University draws its 24,000 students primarily from the greater Denver metropolitan area and graduates generally remain in the area. MSU Denver is divided into three colleges that house a large number of academic programs and majors. The University also houses a graduate school that offers a variety of master's degrees. MSU Denver is one of three academic institutions that share the 150 acre urban Auraria campus. The University of Colorado at Denver and the Community College of Denver are also housed on the Auraria campus. The Department of Computer Information Systems and Business Analytic (CISBA) is one of six departments that comprise the AACSB accredited College of Business. During the past twenty years the University, and especially the College of Business, has sought to partnership with area businesses. The CISBA department partners with the Applied Learning Center (ALC) to provide information systems internship opportunities to qualified students.

The CISBA department is an ABET accredited program that supports a highly successful internship program which allows qualified students the opportunity to work in qualified organizations under the supervision of an experienced professional. Students may register for an internship with a qualified organization and receive academic credit. The student may use the academic credit to count as an upper division CISBA elective or as a general elective. The student intern must work under the supervision of a qualified professional who must report feedback to the CISBA department by completing a questionnaire evaluating the performance of the intern. A person from the ALC and/or a faculty member from the CISBA department must conduct a site visit and meet with both the intern and the supervisor. The intern must also provide the faculty supervisor with a log of hours worked and a final report demonstrating compliance with the agreed upon objectives. This paper analyzes the responses of employers submitted through the questionnaire on how they evaluated the student interns and on the responses of students on the questionnaire on how they evaluated the support provided by their employers.

OVERVIEW OF THE CISBA INTERNSHIP PROGRAM

Internships are an important part of the curriculum – not just within the CISBA department but also throughout the College of Business and the general University. Although internships are not "taught" in the same sense as the more conventional courses, they are worthy of the same analysis and scrutiny. An internship is an essential learning experience. An internship allows a student to work at a position in the general real-world environment and receive academic credit for it. The prospective intern must have the position approved by the faculty supervisor from within the CISBA department and by the CISBA department chair. The prospective employer is also vetted to ensure that the student intern is working under the supervision of a professional in the field. The student and employer must decide on a clearly defined set of measurable objectives which is reviewed and approved by the faculty supervisor. Internships consist of one, two, three, or four credit hours and must be completed during a specified time frame

(usually one semester). It is incumbent upon the student to submit a written report with supporting documentation at the end of the semester demonstrating that the objectives have been met. The faculty supervisor, in consultation with the employer, will assign a grade for the course.

Any student enrolled at MSU Denver who meets the requirements is eligible to participate in the internship program. The student does not need to be a CISBA major, however, the great majority of students enrolled in the program are upper level CISBA majors. An eligible student must be degree-seeking with a CGPA of at least 2.5, have a sophomore standing, have completed one full semester at the University, and be enrolled in a minimum of twelve credit hours per year. The position must involve work directly related to the curriculum content in the CISBA department.

Internships are designed to provide students with the opportunity to learn new skills under the guidance of experienced professionals. Completing low level tasks such as entering data into forms, doing backups, or answering telephone calls are deemed unacceptable. Internships may be paid or unpaid although almost all of the internships through the CISBA department are paid. The faculty supervisor and department chair ultimately have the final say on the acceptability of the internship. The internship should not be a reward for past experience or previously acquired knowledge. If the prospective intern has been at the same position for a relatively short period of time (about one year or less) the student is generally allowed to use the current position for the internship. If the prospective intern has been on the job for a longer period, he or she may still be eligible for an internship if the responsibilities have changed significantly over the past year. CLEP exams, credit-by-examination, and portfolio review are used to provide academic credit for prior knowledge.

An internship could be secured in different ways. An employer seeking an intern should contact the ALC. A representative of the ALC will qualify the employer and enter the information into a database. Students seeking an internship are given access to the employer database and apply for the position much like they would apply for a job. The student would submit a resume and hopefully be contacted for an interview. A student could apply directly to an organization in which he or she was interest. If the organization had a mutual interest, the student would contact the ALC and the student and employer would be registered. Also, a student currently holding a qualified position could apply for an internship if the employer agreed to comply with the internship protocol. Regardless of how the placement is obtained, the student must enroll in the CIS 3980 Internship course and follow all published procedures in order to receive academic credit.

The student, the employer, and the faculty supervisor all sign a contract that clearly states what is expected of the student and employer supervisor. The student must work a minimum of fifty hours for each hour of academic credit requested. The student must demonstrate through a log and a final written report that the objectives have been met. Both the employer and the student must submit a survey evaluation indicating their perception of the success of the internship. The survey questionnaires submitted by the employer to evaluate the student intern and the survey questionnaire submitted by the student to evaluate the employer's support form the basis of this study.

EVALUATION INSTRUMENT

The survey instruments that provide the responses used in this study were the instruments used University wide for all internships. They were not tailored to individual departments or colleges. The ALC administered all of the surveys and provided the author with copies. The survey instruments completed by the employer and the student should be independent meaning that the employer and the student each completes the survey without knowledge of how the other responded.

Employers are asked to provide feedback on a survey instrument that contains some general background questions and fourteen evaluation questions rating the student intern on a Likert-type psychometric scale. The scale evaluates the student from 1 (Poor) to 10 (Excellent). The questions and the descriptive statistics associated with the responses are summarized and reported in Table 1. Table 1 presents the questions ranked from the highest mean score to the lowest. Employers generally felt that the best characteristic seen in interns was "the ability to accept directions" while employers seemed to think that the possession of prior "knowledge" was the lowest characteristic demonstrated by students. All of the means are above seven which seems acceptable at some subjective level.

Table 1: Survey Instrument Completed by Employers Evaluating the Student Interns. (Ranked By Mean Score)

Question No.	Question on Employers' Survey	Mean	Std. Dev.	Min. Value	Max. Value	First Quart	Third Quart
11	Ability to accept directions	8.978	1.097	5	10	8.50	9.50
10	Enthusiasm & positive outlook	8.843	1.226	4	10	8.00	9.50
2	Dependability	8.685	1.246	4	10	8.00	9.50
13	Resourcefulness in seeking information	8.657	1.233	5	10	8.00	9.50
9	Competence	8.567	1.286	5	10	8.00	9.50
14	Adaptability	8.567	1.407	1	10	8.00	9.50
12	Interpersonal relations	8.416	1.401	5	10	8.00	9.50
5	Ability to work independently	8.388	1.463	4	10	7.75	9.50
3	Communication skills	8.376	1.308	5	10	7.50	9.50
8	Initiative	8.298	1.309	5	10	7.50	9.50
4	Organizational skills	8.267	1.484	4	10	7.13	9.50
7	Ability to make decisions	7.955	1.467	4	10	7.00	9.00
6	Creativity	7.781	1.795	3	10	6.50	9.25
1	Knowledge	7.225	1.603	2	10	6.00	8.25

Student interns are asked to provide feedback on a survey instrument that contains some general background questions. They are also requested to respond to five evaluation questions rating the support they received from their employer on a Likert-type psychometric scale. The scale evaluates the support from 1 (Poor) to 5 (Excellent). The questions and responses are summarized and reported in Table 2. Table 2 presents the descriptive statistics for the evaluation of support questions ranked from the highest mean score to the lowest. All of the means exceed four which provides a clear indication that students were generally highly satisfied with the support provided. Students rated their "opportunity to build skills" the highest and the "orientation to the position" received the lowest rating.

Table 2: Survey Instrument Completed by Students Evaluating Employers' Support. (Ranked By Mean Score)

Question No.	Question on Students' Survey	Mean	Std. Dev.	Min. Value	Max. Value	First Quart	Third Quart
5	Opportunity to build skills	4.663	0.602	2	5	4.0	5
4	Work environment	4.517	0.693	2	5	4.0	5
2	Supervision/Feedback	4.157	1.054	1	5	4.0	5
3	Training received	4.135	1.057	1	5	4.0	5
1	Orientation to the position	4.067	1.064	1	5	3.5	5

DATA CATEGORIES

Using the information on the student's internship application and on the survey instrument, four categories for the data could be developed. The application for the internship contains a great deal of demographic data. The data were collected from eighty-nine internships that were completed between 1995 and 2011. The data have a time dimension (YEAR) that was measured by the year plus an indicator for semester of 1, 2, or 3 representing spring, summer, and fall semesters, respectively.

Internships can involve a wide variety of activities and responsibilities. Sometimes a particular internship will require the student to perform duties in more than one area. However, since the internships are very short-term, virtually all will have a primary set of responsibilities that can be placed into a single category. That single set of

responsibilities allows the internships to be categorized into a variable named TYPE OF INTERNSHIP. The values for TYPE OF INTERNSHIP used in this study are described below.

- *Database Development*. This includes an objective to develop and use a database at any level. It includes those students who developed small, decentralized database applications using software such as Access to students who develop large, enterprise level databases on Oracle or DB2 platforms. It also includes students who intern as DBAs.
- *End User Support*. This includes people whose primary role is to work a help desk and/or respond is some way to user requests for support.
- *Programming*. This includes programming in any language. It does not include those students who have primary responsibilities for database or web development as defined elsewhere. It does include programming for both new development and maintenance.
- Web Development. This includes the development of web pages and sites. It usually requires programming in HTML or Javascript.
- *Networking*. This includes all internships that require the development or extensive maintenance or a network. Most of the internships in this category involve the creation of and support for a Windows nt network.
- *Systems Development*. This covers a wide range of activities that are not placed in one of the categories defined above. Internships that are placed here generally require some kind of system design. Normally, an internship placed into this category would not require end user support.

Table 3: Contingency Tables Summarizing the Categories of Survey Data

	Gender			Type of Organization			
Type of Internship	**Male**	**Female**	**Total**	**Acad.**	**Bus.**	**Gov't**	**Total**
Database Development	6	3	**9**	1	3	5	**9**
End User Support	18	8	**26**	8	16	2	**26**
Programming	9	3	**12**	0	10	2	**12**
Web Development	5	4	**9**	1	6	2	**9**
Networking	9	1	**10**	3	6	1	**10**
System Development	10	13	**23**	5	15	3	**23**
Total	**57**	**32**	**89**	**18**	**56**	**15**	**89**

Type of Organization	**Male**	**Female**	**Total**
Academic	9	9	**18**
Business	39	17	**56**
Government	9	6	**15**
Total	**57**	**32**	**89**

Students complete internships that can be classified by the type of organization that hired them. The variable TYPE OF ORANIZATION is represented by the domain described below.

- *Government* (including Federal, State, and Local).
- *Business*. This category includes all for-profit business. It also includes three internships that were completed at charitable, not-for-profits organizations.
- *Academic* (including students who worked for K-12, higher education, and vocational).

Finally, the variable for the GENDER of the student intern is defined.

Table 3 presents the contingency tables for three of the different categories of data. The data show a fair representation of internships from a variety of different types of organizations and types of internships. Sixty-three percent of the internships were completed by interns working for private businesses, twenty percent by interns working for academic institutions, and seventeen percent by interns working for governments. Most of the internships (twenty-nine percent) involved end user support followed closely by interns doing system development work (twenty-six percent). Males accounted for sixty-four percent of the internships while females accounted for thirty-six percent. The male to female ratio of majors with the CISBA department is substantially higher than the approximately 3 to 2 ratio of completed internships which suggests that women CISBA majors are more likely to complete internships than male majors. The only category that is not represented is a programmer working at an academic institution.

IMPACT OF STUDENT SURVEY RESULTS ON EMPLOYER PERCEPTIONS

Evaluating the success of an internship can be difficult since the faculty advisor is not on site with the student. The faculty advisor must rely on documents submitted by the student such as a final report and a journal. The surveys submitted by the student's onsite supervisor and by the student are the two documents that allow both parties to report back candidly. The survey responses provide crucial insight into the internship. The employer clearly identifies the strengths and weaknesses of the student allowing the faculty advisor to make a judgment on what the student has learned. The employer's survey responses are generally the most important document the faculty member receives and normally receives the most weight when evaluating the student and the internship. However the student's survey responses also provide valuable insight into the success of the internship. Students would expect to enter the position with a preconceived notion of what a professional work environment would be like. They would expect an orientation to the business environment as well as adequate training for the position. They would expect the onsite supervisor to provide clear guidance on the deliverables and provide timely feedback on the students' progress. The students would also anticipate being provided with opportunities to build a useful skill set. The responses from the employers' survey need to be tempered with the students' survey responses. For example, students who feel they were not given the proper training may receive relatively low responses from their employers. The perceptions of the employer would be associated with the perceptions of the student.

The model used to test the association of the employer response variable to the student response is a one-way Analysis of Variance (ANOVA) model. The one-way ANOVA model tests the significance of the equality of response variable means grouped by the different responses reported for a factor. A more complete treatment of the ANOVA model may be found in Anderson, D.R. et al. (1999) or Groebner, D.F. et al. (2014) as well as many other sources. The model requires that the means of a response variable (employer survey responses) be computed when grouped by the individual responses (5, 4, … , 1) of a factor (the student survey responses). The model computes an F-Statistic that is used to test if at least one of the computed means is different from the other means. Therefore, there would be statistical evidence that the response of the employer to a question would be, at least in part, impacted by the response of the student.

The model is depicted below.

H_o: $\mu_{i,j,5} = \mu_{i,j,4} = \mu_{i,j,3} = \mu_{i,j,2} = \mu_{i,j,1}$
H_A: The means are not all equal.

Where $\mu_{i,j,k}$ indicates the mean employer response identified as follows:

i is the employer response to question i as shown on Table 1. i = 1, 2, … ,14 (Response Variable)
j is the student response to question j as shown on Table 2. j = 1, 2, … ,5. (Factor)
k represents the possible score selected by the student on the jth question. k = 5, 4, … ,1 (Level or Group)

Minitab 17 was used to estimate the above model for all five student survey questions and all fourteen employer questions. The results are presented and discussed in the next section.

RESULTS AND ANALYSIS

Both employers and students completed and submitted their respective evaluations independently. The employer would likely never know the student responses. The student would submit his or her response without knowing the employer ratings. A Pearson correlation matrix was generated among all employer and student responses and is presented in Table 4. The question numbers for employers and students correspond to the question numbers in Tables 1 and 2, respectively. All values in the matrix are positive indicating positive relations among all student and employer responses. For example, the higher a student rated the *orientation to the position*, the higher would be the employer response to all fourteen questions. Generally, the more satisfied the students were with the internship, the more satisfied the employers were with the student. Fifty-one of correlations were statistically significant at the 0.05 level of significance. The responses to the first student question (*orientation to the position*) were significantly correlated with all of the employer responses at the 0.10 level of significance. The student responses to the fourth question (*work environment*) was significantly correlated with the all but one of the employer responses at the 0.10 level as was the student responses to the fifth question (*opportunity to build skills*).

Table 4: Pearson Correlation Matrix with P-Values

Employer Question No.	Student Question Number									
	1		2		3		4		5	
	R	P-VALUE	R	P-VALUE	R	P-VALUE	R	P-VALUE	R	P-VALUE
1	**0.268**	**0.011**	**0.251**	**0.018**	**0.260**	**0.014**	**0.247**	**0.019**	**0.250**	**0.018**
2	**0.265**	**0.012**	**0.306**	**0.004**	**0.218**	**0.040**	**0.269**	**0.011**	**0.319**	**0.002**
3	**0.271**	**0.010**	**0.216**	**0.042**	**0.263**	**0.013**	**0.241**	**0.023**	**0.249**	**0.018**
4	**0.282**	**0.008**	**0.324**	**0.002**	**0.290**	**0.006**	**0.268**	**0.011**	**0.319**	**0.002**
5	**0.224**	**0.035**	**0.236**	**0.026**	**0.271**	**0.010**	**0.288**	**0.006**	**0.253**	**0.017**
6	**0.243**	**0.022**	0.084	0.431	**0.246**	**0.020**	0.092	0.391	0.178	0.095
7	**0.297**	**0.005**	**0.225**	**0.034**	0.180	0.092	**0.219**	**0.039**	0.195	0.067
8	**0.259**	**0.014**	**0.254**	**0.016**	0.196	0.065	0.204	0.055	**0.215**	**0.043**
9	**0.242**	**0.023**	0.206	0.053	0.202	0.057	**0.292**	**0.005**	**0.235**	**0.027**
10	0.182	0.087	0.125	0.244	0.091	0.396	0.184	0.085	**0.312**	**0.003**
11	**0.357**	**0.001**	**0.317**	**0.002**	0.154	0.148	**0.367**	**0.000**	**0.298**	**0.005**
12	**0.217**	**0.041**	**0.209**	**0.049**	0.165	0.122	**0.286**	**0.007**	0.175	0.101
13	**0.252**	**0.017**	**0.230**	**0.030**	0.145	0.176	**0.283**	**0.007**	**0.287**	**0.006**
14	0.194	0.068	**0.227**	**0.033**	0.135	0.207	**0.244**	**0.021**	**0.269**	**0.011**

R is the Pearson Correlation Coefficient Bolded Value Is Significant at Alpha = 0.05

Employer Responses to Student Perception of *Orientation to Position*

The ANOVA results of the employer responses are shown in Table 5. The F-Statistic, the P-Value and the R-Squared are reported. The F-Statistic and P-Value are bolded whenever there is significance at the 0.05 level and are marked with an asterisk whenever there is significance at the 0.10 level. There is rather strong evidence of a statistically significant impact on the employers' perception of the internship when the students' felt they received a strong orientation to the position. Nine of the fourteen employer responses are significant at the 0.05 level with one other being significant at the 0.10 level. Employers' ratings significantly responded to students' ratings in *knowledge*, *dependability*, *interpersonal relations*, *initiative*, *ability to accept directions*, *communications skills*, and *competence* when the students perceived that they received a strong orientation to the position. Interestingly, employers viewed students with a strong orientation as possessing more of the "hard skills" such as knowledge and competence as well as softer skills like dependability and interpersonal relations.

Table 5: ANOVA Results Testing Independence of Employer Responses When Students' responded to the *Orientation to the Position* and *Supervision/Feedback* Questions.

	Statistics For Employer Responses					
	Orientation to the Position			*Supervision/Feedback*		
Question	**F-Stat**	**P-Value**	**R-Sqr.**	**F-Stat**	**P-Value**	**R-Sqr.**
Knowledge	**2.73**	**0.034**	.1152	**3.36**	**0.013**	.1381
Dependability	**3.89**	**0.006**	.1563	**3.37**	**0.013**	.1382
Interpersonal relations	**4.45**	**0.003**	.1749	1.70	0.158	.0747
Initiative	**2.66**	**0.039**	.1135	**2.89**	**0.027**	.1221
Ability to work independently	1.48	0.217	.0657	**2.99**	**0.023**	.1246
Creativity	1.38	0.249	.0616	0.73	0.572	.0337
Ability to make decisions	2.41*	0.055*	.1031	1.18	0.327	.0530
Organizational skills	**2.50**	**0.0498**	.1063	1.50	0.210	.0667
Adaptability	**2.96**	**0.0248**	.1237	1.38	0.248	.0616
Enthusiasm & positive outlook	1.20	0.315	.0542	0.60	0.666	.0276
Ability to accept directions	**5.79**	**0.000**	.2161	**2.59**	**0.042**	.1098
Communication skills	**2.75**	**0.033**	.1157	1.19	0.322	.0536
Competence	**2.52**	**0.047**	.1070	1.31	0.271	.0589
Resourcefulness	1.56	0.191	.0693	1.57	0.189	.0697

Bolded Value Is Significant at Alpha = 0.05 * Significant at Alpha = 0.10

Employer Responses to Student Perception of *Supervision/Feedback*

The ANOVA results of the employer responses to student perceptions of sufficient supervision and feedback are reported in Table 5. Five of the fourteen employer responses are significant at the 0.05 level. The evidence suggests that students who receive adequate supervision and feedback are perceived to more effectively *accept directions*, *show initiative* and then possess the *ability to work independently.* The employers' responses of possessing *knowledge* and being *dependable* also are affected significantly by student ratings of adequate supervision and feedback.

Employer Responses to Student Perception of *Training Received*

Table 6 shows the ANOA results of the employer survey responses when the interns rated their perceptions of the training they received for the responsibilities they were given. Only three employer responses were found to be significantly affected by the student ratings at the 0.05 level of significance. When students perceived that they were provided with more effective training, the employer ratings of students relating to *initiative*, *ability to work independently*, and *adaptability* are significantly affected. The employer response to the *knowledge* question is significant at the 0.10 level.

Employer Responses to Student Perception of *Work Environment*

The ANOA results for the potential impact of the student perception of the work environment on employer responses are presented in Table 6. The ratings of the work environment questions have a statistically significant effect on eight of the fourteen employer responses at the 0.05 level of significance. When students believed that they were in a favorable work environment, employers responded favorably to questions that involved the hard skills like *knowledge* and *competence*. Employers believed that students demonstrated more *initiative* and were *adaptable*. Employers also thought that students who viewed the work environment more favorably possessed good *communications skills*, were *dependable*, and were *able to work independently*. Five additional employer responses were significantly impacted by the student responses at the 0.10 level of significance. The significantly impacted employer responses include *interpersonal relations*, *creativity*, *ability to make decisions*, *enthusiasm & positive outlook,* and *resourcefulness*. The only employer response that failed to be affected by the students' work environment response at the 0.10 level is *organizational skills*.

Table 6: ANOVA Results Testing Independence of Employer Responses When Students' responded to the *Training Received* and *Work Environment* Questions.

	Statistics For Employer Responses					
	Training Received			*Work Environment*		
Question	**F-Stat**	**P-Value**	**R-Sqr.**	**F-Stat**	**P-Value**	**R-Sqr.**
Knowledge	2.11*	0.073*	.1126	**3.04**	**0.033**	.0970
Dependability	1.51	0.197	.0832	**3.81**	**0.013**	.1187
Interpersonal relations	1.80	0.121	.0981	2.17*	0.098*	.0711
Initiative	**2.35**	**0.048**	.1254	**3.16**	**0.029**	.1015
Ability to work independently	**2.55**	**0.034**	.1333	**3.10**	**0.031**	.0987
Creativity	1.81	0.119	.0985	2.64*	0.055*	.0852
Ability to make decisions	0.73	0.606	.0419	2.70*	0.051*	.0869
Organizational skills	0.88	0.496	.0505	1.72	0.169	.0573
Adaptability	**2.34**	**0.049**	.1235	**3.28**	**0.025**	.1039
Enthusiasm & positive outlook	0.78	0.566	.0450	2.42*	0.072*	.0787
Ability to accept directions	0.88	0.496	.0505	**5.67**	**0.001**	.1667
Communication skills	0.53	0.752	.0310	**3.16**	**0.029**	.1003
Competence	0.69	0.633	.0398	**3.60**	**0.017**	.1128
Resourcefulness	0.41	0.841	.0240	2.34*	0.079*	.0764

Bolded Value Is Significant at Alpha = 0.05 * Significant at Alpha = 0.10

Employer Responses to Student Perception of *Opportunity to Build Skills*

Table 7 presents the ANOVA results of the employer response ratings when the students rated their opportunity to build skills provided through the internship. Half of the fourteen employer responses are significant at the 0.05 level. Students who felt they were provided with valuable opportunities to build skills were associated with employer perceptions of being *competent* and *resourceful*. They were also perceived to be *able to work independently*, demonstrate *initiative*, and were *dependable*. Students who perceived that they had opportunities to build skills were also associated with being *enthusiastic* and having a *positive outlook.*

Table 7: ANOVA Results Testing Independence of Employer Responses When Students' responded to the *Opportunity to Build Skills* Question.

	Employer Responses		
Question	**F-Statistic**	**P-Value**	**R-Squared**
Knowledge	2.15*	0.099*	.0707
Dependability	**3.32**	**0.024**	.1049
Interpersonal relations	2.58*	0.059*	.0835
Initiative	**3.27**	**0.025**	.1045
Ability to work independently	**3.20**	**0.027**	.1015
Creativity	1.31	0.278	.0441
Ability to make decisions	1.28	0.285	.0433
Organizational skills	1.62	0.190	.0208
Adaptability	1.84	0.147	.0609
Enthusiasm & positive outlook	**3.42**	**0.021**	.1076
Ability to accept directions	**3.72**	**0.014**	.1161
Communication skills	1.23	0.302	.0418
Competence	**3.21**	**0.027**	.1017
Resourcefulness	**2.94**	**0.038**	.0939

Bolded Row Is Significant at Alpha = 0.05 * Significant at Alpha = 0.10

IMPLICATIONS FOR ASSURANCE OF LEARNING

Internships are among the most interesting learning vehicles at the University. Each internship is unique and is defined by its own set of learning objectives. The results of this study might provide evidence that show compliance to the AACSB International's assurance of learning requirements. Each employer offers an individual assessment of the intern that evaluates how well that student intern has met a stated set of learning objectives. (The student must also submit a final report with the faculty advisor clearly demonstrating how the learning objectives were met.) While the results contained in this paper might provide evidence for the measurement of student learning, they also may be used to help *improve* student learning. In the AACSB International standards, using findings to improve student learning is known as closing the loop. Closing the loop is regarded as an important element of assurance of learning. Following are some ways in which the results of this study might be used to improve student learning. The CISBA department is currently looking into ways to implement the following suggestions.

All prospective students who are interested in an internship must attend an orientation seminar conducted by a representative from the Applied Learning Center prior to completing an internship application. The information contained in Table 1 would provide a basis for a discussion of employer expectations. For example, employers tend to view students as enthusiastic, dependable, resourceful, and able to follow directions. However, employers would like to see more creativity, initiative, and decision making from the students. Putting student interns on notice of employer concerns would make for a better and more productive experience for both students and employers.

Employers might also benefit from the results of this study. The results shown in Table 2 might provide valuable insights when disseminated to employers. For example, the importance the students place on the orientation to the position is critical. According to Table 2, students ranked the orientation to the position as the lowest level of support provided by the employers. However, Table 3 suggests that when the students felt that they were provided with a good orientation, the employers rated them higher in all categories. If employers are aware that students want and need a highly structured and detailed orientation, the internship experience may be greatly improved.

Both the Applied Leaning Center and the CISBA Department support extensive and informative web sites. References to this study and perhaps a brief summary of the major results might generate interest in the internship program as well as an evaluation of the requirements placed upon the student interns and the employers.

CONCLUSIONS

The analysis of the eighty-nine internships included in this study appear to indicate a highly successful internship program within the CISBA department. The program is robust including internship placements representing several different areas within the information systems discipline. Employers include those in private industry, government agencies, and academic institution. When assessing their student interns, employers mean responses to the fourteen assessment questions ranged from about nine out of ten (*ability to follow directions*) to 7.2 out of ten (*knowledge*). Generally employers rated the softer, behavioral skills higher than the harder, more analytical skills. Students also appear to assess their internship placement favorably. The student means from the questionnaire ranged from about 4.7 out of five (*opportunity to build skills*) to about 4.1 out of 5 (*orientation to the position*).

A correlation matrix generated among the employer and student responses produces results that are always positive and mostly significant. This provides strong statistical evidence that favorable responses from students are associated with favorable responses from employers. One-way between subjects ANOVA calculations were conducted to compare the effects of the fourteen individual employer responses on the five response levels categorized in the student survey rating the students' perceptions of employer support. At the 0.05 level of significance, at least half of the employer responses indicated a significant effect to the student responses relating to the questions of *orientation to the position*, *work environment*, and *opportunity to build skills*. There is also statistical evidence that at some of the employer responses are impacted by the student response to the *training received* and the *supervision/feedback* questions.

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Experimenting with Course Design and Discipline Integration in an Applied Environment

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ABSTRACT

Many faculty members have thought about a truly interdisciplinary applied class. This is the case of a dream that came true across two universities, six colleges, three faculty members, and one corporate business partner. Here was the opportunity to design a course with interdisciplinary faculty and applied mentors from the business partner working together. It is a chance to see if a course design can really help with interdisciplinary thinking, applicability, and relevance while engaging the community. It offered the chance for experimental program integration. The program has been run once and some of the results are outlined below in the paper. Many dream of innovating in education, but few get the chance offered to these participants.

Keywords: business partner, course design, innovative program, program integrations, application, interdisciplinary, community engagement, relevancy

INTRODUCTION

In the Spring of 2016, faculty from two universities and three colleges, along with mentors from an industry partner developed and offered an interdisciplinary class focused on new product innovation. The students taking the class were from six colleges in the two universities. The faculty, in various combinations, had worked together for several years. They often talked of a course that would integrate many disciplines and thus integrate material across disciplinary lines. The hope was to do this with a strong local business partner.

In 2015, a strong local business partner with experience in working with university teams from across the country presented the opportunity to make the vision a reality. The design college graciously provided a physical meeting space proximate to both universities and to transport. The faculty were able to recruit an interdisciplinary group of participants through a combination of structured classes and independent projects. Some were focused on the credit, but most were focused on the opportunity to participate in this new venture and a résumé builder.

In the second week of January 2016, all was ready for the kick-off of the dynamic new course that would challenge all who were involved, students, faculty, and professional mentors.

PREVIOUS RESEARCH

Classes designed to teach students how to collaborate across disciplines in order to develop new products have not been widely adopted in the United States. Unfortunately, this runs counter to trends in professional practice of business professionals, industrial design professionals and engineering professionals. One of the better-known programs is Lehigh's integrated product development program (Ochs, 2003). In this program, teams of engineering students, business students and design art students work with external sponsors to design and prototype new products. Lehigh University is fortunate to have departments of business, engineering and design arts all within the University (Ochs 2006). Multidisciplinary product development has also occurred when students from business and engineering programs collaborate with medical professionals to design medical devices. Since the medical device field is technically complex, highly-regulated and inherently interdisciplinary, solving medical device design problems requires expertise from many different fields. One example of such a program is the University of Alabama at Birmingham's program that involves business students, engineering students, and clinicians in a year-long effort to develop new medical devices (Eberhardt, 2016).

WHY?

There are several reasons why this project was undertaken by the faculty, participants, and by the staff of the client. Industry today is working interdisciplinary or cross-functional teams. Colleges and universities tend to be organized in silos of academic work. Often, not only are they separated in university organization charts, as in the case of the authors' university, but also physically separated by buildings, space and even campuses. It is in the interest of

business and other organizations to help prepare students to work across the disciplines. Young people with degrees will be assumed ready for this kind of work when they graduate.

The project also fits well with university goals for interdisciplinary learning, application, relevancy and community engagement. The project is an applied experience working with professionals, from the client, on their real work opportunities. The engagement of the business partners or client in this case was serious and included a huge time investment on the part of their employees. It was also community engagement as the two universities were engaged across their normal territorial borders. The project seemed very relevant as the participants tackled current problems in the industry.

Course Design

The framework for the course design was built around the five agreed-on meetings at the client location. These are outlined in Table1. In addition to this framework of scheduled meetings were weekly meetings held in the design college classroom dedicated to that purpose. These weekly Tuesday night meetings usually involved one or a combination of three principle activities. First, faculty would use the time to provide structure to the course or to the projects, develop some background material or related terminology across the disciplines. Second, time was used with the business partner mentors. The mentors would drive the hour or so to the campus to spend time with the participants to try to help them improve their thinking as the participants were moving through their projects. Third, was work time for the teams to work with faculty in the room available for questions at any time.

In addition to basic milestone presentations outlined in Table 1 and the Tuesday night meetings, there was an expectation of work on Blackboard usually due on Fridays at noon.

Table 1 Framework for Course Design

Date	**Topics Presented**	**Weeks**	**Developmental Phase**
Jan 15th	**Client presents topics of interest**	1 week	**Introduction**
Feb 12th	**Each group presents:** **Exploratory research** **Three, "we believe," statements** **Three problems or opportunities**	4 weeks	**Exploratory Research**
March 18th	**Present three ideas**	5 weeks	**Context and Experience for three ideas**
April 1st	**Selection of one idea from three**	2 Weeks	**Presented three ideas**
April 22nd	**Final Presentation**	3 Weeks	**Product and Plan**

Introduction Phase

In this week of set-up of the class, the participants got to know all three spaces for operation: the assigned class room, the client space, and finally the Blackboard site for class communication, assignments etc. They also had introductions to the leaders on the client side, the three professors, and the course administrator who was a student volunteer who would keep notes of class discussions to post on Blackboard, chase down missing items, and generally help get things done. The participants were also placed in their teams named for major cities.

At the first client meeting, the topics were introduced. The teams had time to discuss and decide which topic(s) most interested them. The client presenter gave them a lot of freedom in the choice, making it clear that the teams did not have to cover every topic. The topic choices are below by city name of the team.

Buenos Aires -- Privacy
Detroit -- Hacker
Dubai-- Biophilia
New York-- Mobility
Paris-- Mobility
Tokyo-- Biophilia

Exploratory Research

The exploratory research phase lasted for four weeks. The groups were supposed to investigate in both secondary and primary research, what has been done and what is needed. In the working sessions, there were discussions about where to find information on what has been done, and how to observe and interview people about opportunities in any of the four areas being studied for the client. The technology of today and the potential to take movies and pictures became a powerful tool in the primary research and soon their spaces in the dedicated room became filled with key pictures and observations.

The goal of this section was to come up with at least three supported, "we believe," statements. These are statements that the team developed as they investigated, observed and studied the topic areas. From those statements, they were to develop three opportunities or problems that they could work on. The attempt here is to keep the mind open and not settle on one idea too rapidly. Second, the research helped the participant teams to present their beliefs and opportunities with support in the form of statements, pictures, renderings, videos, others research, etc.

The face-to-face class times were dedicated to the client and faculty teams asking hard questions. Examples of posed questions included, "How do you know that?," "Have you observed the same thing in multiple locations?," "What have others proposed as a solution to this problem?," "Is this problem strong enough to build a product around?," "Does this fit with the image of the client company?" The spirit was always in helping the groups to be more open and to think more clearly about the topics that they were exploring.

In the rich discussion after the presentations, the teams were encouraged to think through if they really had three different opportunities and if they had enough support. Should the team replace one or more opportunities? This was done as business partner professionals moved from participant team-to-team and shared their perspective. The teams were left with challenges as the client mentors did not always agree, and posed questions from different directions. This provided quite an education compared to the normally unidirectional classroom lecture.

Context and Experience

This section lasted five weeks, including a week of vacation for spring break for many of the participants. The goal of this section was to focus on three ideas. Research was continuing along with developing mockups to present. Ultimately, the groups were to develop for each of three ideas with the following:

Product Name

Photo of context or environment of use

Description of the product

Visual sketch of the experience

How would customers use the product?

How does the product work?

Create and demonstrate use with a mockup of the product

The day of presentations was exciting as the room filled with 18 product mock-ups from small to large. Groups presented the context and product ideas to client groups at separate tables. This permitted more intimate viewing of the product than in the front of the room. The reviewers could touch, and in some cases, try operating the mock-ups. Two or three client professionals would give feedback at a time. The clients would rotate amongst the participant groups about every twenty minutes. At the end of the day, the groups had ideas on how to improve the thinking, or, decided to make changes in their portfolio of three products.

During this five-week time period, the meetings with faculty and clients were challenging the participant groups to make the context very clear and to focus on one major opportunity. The meeting previous to the presentations was quite intensive as the client professionals asked hard and focused questions. If this is such a universal problem, where is the support? These client meetings with the groups occurred approximately every two weeks throughout the semester.

Presentation of three developed ideas
This section lasted two weeks. The goal of this section was to develop each of three ideas fully. In some teams, they were iterating as one or more of their ideas no longer seemed strong. This happens at any point in the process. The idea of iteration seems simple in class lectures, but when you actually have to put an idea you have developed down and go back several steps to another idea and do the work to bring it forward, it has new meaning. The faculty were willing to let the teams simply reduce the number of ideas they were looking at but the business partner mentors stood firm and the team members learned a lot.
The presentation to the business partner mentors started as always with the problem and the context or environment of the problem. Hopefully, the presentation of the problem was stronger with each presentation. The teams were trying to assure the strength of the need or desirability. One of the new elements was the investigation of reactions to the models or mock ups as they are presented to potential users. A second new element to these presentations was the engineering feasibility calculations. Suddenly the groups were having to deal with feasibility, the reality of thinking about making the proposed product and what it would take to make it work. Significantly, this requires thinking about safety, durability and many other issues that were not essential parts of early sketches. The third part of this presentation was the need to develop some specifics of the business side of the proposed product, or viability. How big is the market segment and what is it like? What competition exist (direct, indirect, substitutes), or may be forth coming based on research? What are the projected sales? All of these factors and the others listed below were designed to lead the groups to think about which of their ideas were the best.

Photo(s) of problem

Photo(s) of context of problem

Sketch of Solution to problem

Sketch of use case experience

Photo of mock up being presented

What was learned presenting to people?

Engineering feasibility calculations

Target market size, and persona

Competition in the market

Value proposition

PLC one to seven years

Groups recommendation of one to develop
At the end of the day of presentations, the teams selected one product based on all the comments to continue for the final three weeks. The participant groups worked hard to pull together all the information required. The goal was informative presentations that would make a clear case for each product. Then, with the help of the mentors, the final choice could be made.

Product and Plan
The groups had three weeks to bring it all together in a coherent presentation with a realistic mock up or early stage prototype. The challenge of these three weeks was to clearly justify the need or desirability of the product, to make the engineering case for feasibility, and to make the business case for viability. Below are the expectations for the final presentation.

What we are about and "Why?"
Market Trends – What drives demand?
Key observations in context
Behaviors/Attitudes (context/action photos)
Target Problems and how to evidence
Solutions – name, benefit, renders w/ user
Application render in context – "In use"
Feasibility

Inspiration
Mechanical and technical function
Manufacturing Process
Materials
Exploded view w/ B.O.M.
Cost estimates
Performance Specifications
Eng. Calculations
Mock up concept
Photos of demonstrations in context
Validation – "What did you learn?"
Target market – Define size and persona
Sales Trajectory – "PLC" in unit sales
Competitive positioning
Unique Value proposition

The final day of presentations were held at the client's location and the students brought their refined models of their products.

ASSESSMENT OF LEARNING OUTCOMES

The following four learning outcomes were defined and assessed:

1. Students will be able to work effectively in interdisciplinary teams.
2. Students will be able to describe the roles of different disciplines in the product innovation process.
3. Students will be able to learn from practicing professionals.
4. Students will be able to apply knowledge from many different sources to formulate solutions to an unstructured problem.

Qualitative assessment data was gathered from a focus group and quantitative assessment data was obtained using survey. At the end of the program, one of the professionals who had been affiliated with the corporate partner before retirement volunteered to moderate a focus group with the students about the class. The moderator was well-known to the students because she had participated in several critique sessions with the corporate mentors. The faculty were not present when the moderator carried on a free-flowing discussion about the process, the teams, the work, what they learned, etc. Student remarks were recorded by the administrative student. Remarks that were relevant to the learning outcomes are presented below.

The quantitative assessment data was gathered using a Student Assessment of Learning Gains (SALG) (Seymore, 2000) survey which was administered at the end of the program. Twenty-five of the 26 students in the class participated in the survey. In this case the reporting is on those questions that were objective and answered in a Likert scale format. This was a one-to-five form where one was low and five was high. There were a total of 38 questions, of which some were qualitative. The authors selected the average of questions that were relevant to the learning outcomes of the class.

Outcome 1: Students will be able to work effectively in interdisciplinary teams.
The following comments relating to outcome one were recorded at the focus group.

1. It was cool to see how the three disciplines work together, gives a real world perspective while in a college setting. One of the most important part of the project.
2. Really nice to see the other side of product development, didn't need to see the nitty gritty of it all.
3. The wildcard (majors other than business, design, and engineering) was also beneficial to offer a unique perspective.
4. Most important thing: the feedback from the client (learned something every time they talked) and also the involvement was getting to work with all the different disciplines, learned how to communicate information effectively between the different disciplines.

Table 2: SALG survey questions and averages responses relevant to outcome 1.

Question	Average
As a result of your work in this class, what gains did you make in your skill of working with people from other disciplines?	4.35
As a result of your work in this class, what gains did you make in your skill of applying the techniques and concepts from your discipline to an interdisciplinary project?	4.13
As a result of your work in this class, what gains did you make in your skill in Assessing differing perspectives in decision making?	4.13
As a result of your work in this class, what gains did you make in your comfort level in working on complex interdisciplinary problems?	4.27
As a result of your work in this class, what gains did you make in your belief that interdisciplinary thinking is necessary for success in your career?	4.55
How much did working with peers outside of class help your learning?	4.14

It is easy to see that the participants reported getting a great deal out of the interdisciplinary work both in the qualitative discussion group and in the more quantitative Student Assessment of their Learning Gains. In the qualitative section, there is a reference to the "Wild Card" members of teams. Each participant team contained at least one person from each of the following disciplines: business, design, engineering; in addition, there were other participants from a variety of majors in the college of arts and sciences, and from the college of interdisciplinary studies.

The client feedback has been included here as well as it was very interdisciplinary in nature. Some of the areas of the client mentors included: business, design, engineering, research, ethnography, etc. These interdisciplinary mentors helped to make important contributions to the participants. The questions were designed to look at the interdisciplinary learning and application in several ways. First, could you apply your discipline to an interdisciplinary problem. Second, did the participants improve at looking at things from different perspectives. Third did you make gains in addressing the complexity of interdisciplinary problems. Do you see the importance of interdisciplinary thinking in your career? This was one is very important. If the participants can grasp this, then the door is open for new thinking into the future.

Outcome 2: Students will be able to describe the roles of the different disciplines in the product innovation process.

These are students' comments as recorded by the student administrator for the project.

1. Nice having the experts in their field, but there was conflicting feedback.
2. Would have liked to learn more from the (three different) professors with lectures, a lot of time on design. Profs should have spent more time lecturing. (Some disagree with this.)
3. Enjoyed working with *my design professor* on project, didn't work with other professors too much because people focused on their corresponding professors.
4. Respect was a major force to resolve. Wasn't too much arguing in the beginning, more was directed towards the end.
5. Professors worked well together.
6. Liked that there was a workplace always there to utilize and it was almost personalized by team to feel like it was their area. Also, people liked being able to see the progress of ideas.
7. Posted pads were a bit messy and PowerPoints/ Blackboard were more used for information from Professors. However, it was good that you could always go back to the board and see what was done and what you missed. Both ultimately good because we were very mobile.

Table 3: SALG survey questions and averages responses relevant to outcome 2.

Question	Average
As a result of your work in this class, what gains did you make in your understanding the roles of different disciplines in product design and innovation?	4.63
As a result of your work in this class, what gains did you make in your understanding the relationship between a product's desirability, engineering feasibility and business viability?	4.35
As a result of your work in this class, what gains did you make in your confidence that you understand the innovation and design?	4.09
As a result of your work in this class, what gains did you make in Identifying multiple approaches for solving a problem in a given context?	4.05

The silos of the campuses are problematic for student learning and preparing for the world of work where they must work across the disciplines. In this case, the authors were really interested to see how the participants felt about moving across the silos both physically and topically.

It is interesting that while they felt the professors worked well together, that they would have liked to learn more from each discipline. Perhaps in the effort to create a real-world experience, taking the role of coaches or facilitators did not provide enough discipline content.

The issue of respect is important. There were some very different styles of working together in the teams. One had to do with timing and planning. This became evident at the end when some people were willing to do anything to drive to the finish line with a product and a plan and others did not feel that push.

In the objective portion, there was again strong support, particularly in understanding the importance of the roles of different disciplines which is crossing the silo topically.

Outcome 3: Students will be able to learn from practicing professionals.

These are students' comments as recorded by the student administrator for the project.

1. Most important thing: the feedback from the client (learned something every time they talked).
2. Disconnect from what was asked by the client's professionals and what was asked by the Professors made some situations uncomfortable.
3. Nice having the experts in their field, but there was conflicting feedback

Table 4: SALG survey questions and averages responses relevant to outcome 3.

Question	Average
As a result of your work in this class, what gains did you make in applying what you learned in this class to other situations?	4.00
How much did getting activities at the corporate sponsor's location help your learning?	4.27
How much did discussions with corporate staff in the college's project room help your learning?	4.59

Community engagement is a term of university faculty and administration and is not a focus of students other than they seem to like things that are real world and applied. In this case, there were two kinds of community engagement: direct with the business partner or corporate client, and, indirect with the participants going out into the community to investigate problems in the empathy or ethnography stage, potential solutions and validation of an idea. Finally, there was the validation of the selected prototype.

In the discussion group, there was not much on this topic. However, in the Student Assessment of their Learning Gains there was a very favorable reaction to being on-site at the corporate location and on getting the corporate mentors input on campus. There is support for the direct engagement.

This may be a weakness in the data collection as the participants spent a lot of time in other organizational environments watching, taking pictures, talking, trying to understand the problems that people were facing that could be solved by the teams.

Outcome 4: Students will be able to apply knowledge from many sources to formulate solutions to an unstructured problem.
These are students' comments as recorded by the student administrator for the project.

1. Gives a real world perspective while in a college setting. One of the most important parts of the project.
2. Most important thing: the feedback from the client (learned something every time they talked).
3. Disconnect from what was asked by the client's professionals and what was asked by the Professors made some situations uncomfortable.
4. Nice having the experts in their field, but there was conflicting feedback

Table 5: SALG survey questions and averages responses relevant to outcome 4.

Question	Average
As a result of your work in this class, what gains did you make in your understanding the concept of validation?	4.17
As a result of your work in this class, what gains did you make in your understanding of problem identification?	3.9
As a result of your work in this class, what gains did you make in your skill in formulating a novel approach to a problem?	3.87
As a result of your work in this class, what gains did you make in connecting key ideas with knowledge learned in other courses?	4.00
As a result of your work in this class, what gains did you make in drawing conclusions from examples, facts, models, and/or theories from more than one discipline?	3.86
As a result of your work in this class, what gains did you make in applying what you learned in this class to other situations?	4.00

In terms of application, the participants were loud and clear that they got a lot out of working with the corporate or business partner mentors. They liked the real-world perspective and the professional feedback. What they struggled with was the lack of consistency, particularly with the professors. In the objective data from the Student Assessment of their Learning Gains, it was positive, but not as strong as in some of the other area. The same seems to be true of the only two questions that were focused on relevancy.

CONCLUSIONS

For the authors, this was a realization of a dream to attempt this kind of project across universities, colleges, and including the corporate world.

The participants seemed to get a lot out of it in several ways. First, as the reader has seen above from their responses in the discussion group and on the Student Assessment of their Learning Gains, the participants showed an overall positive response. Second, they also seemed to get a lot out of it in the form of a résumé-builder as anecdotally they have used this project to open doors for themselves as leaders in a variety of fields. The engineers continued with the corporation to work on further design and prototyping. Some of the participants are doing incredible things, for instance, one participated in National Science Foundation Program in the summer of 2016 in a national competition and did very well. The team is now seeking grant funding for a project. Another has ongoing research in the same industry. Overall, the participants got a lot out of the program and would have it offered again with minor modifications.

The faculty really enjoyed the program but have significant trouble with the workload involved. Dyadic interdisciplinary team-teaching is tough enough as you really have to prepare to use each other's strength. When you make that a triad and consider the different teaching cultures, (even across universities), it gets more complicated and requires more time and thought. In this case, there was not only a triad of professors, but the entire business partner mentor group of excellent and dedicated professionals.

These corporate mentors were extremely generous with their time and knowledge, often driving snow filled roads to spend two hours with the participants. As observed above, they also came from different disciplines.

This became a real challenge as faculty working with the participants. The young participants would like one answer and yet they could often get multiple perspectives on the same issues. Professors would then have to facilitate the teams making a choice without becoming the guide.

In short, for faculty it was time, mental time, physical time (more class meetings, and travel to corporate client for meetings etc.), team time, which all added up for each individual. In the first program, it was largely uncompensated time which raises a larger issue for colleges and universities.

An educational institution wanting to run a program like this needs to think about the cost. The final program size was 26 participants with 24 paying tuition to one of the universities. It used three faculty members, a dedicated classroom space, and supplies, etc. which were provided by the design college. The classroom was pulled out of service for other classes. A university administrator would have to look at the total cost and consider how in future generations of the program to develop a sustainable funding model.

The experiment in course design and discipline integration in an applied environment was a rich experience, a great success for participants and faculty. The challenges are really how to move forward and are there ways to do that to reduce the cost impact.

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Teaching Microsoft Project in the Project Management Classroom: The Dream Home Project Exercise

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ABSTRACT

One of the learning outcomes associated with our course in project management relates to the development of knowledge and skills in the use of technical tools (e.g., software) for project work. As such, we require that our students learn and use Microsoft Project Professional® to plan, schedule and control a simulated project. We developed this project exercise for use as an in-class, instructor-directed learning activity or as a self-directed activity for use in combination with an online video learning platform (e.g., Lynda.com). When used as a framework for discussing project scope, schedule and cost, a simulated "dream home" build allows students to plan, schedule, budget and control a project that can be easily envisioned and understood, yet is customizable to suit individual course and instructor learning outcomes.

Keywords: project management tools, Microsoft Project Professional®, project planning and control; experiential exercise

INTRODUCTION

All organizations face unique challenges when handling complex projects, most notably the need to organize, manipulate, display and communicate project activities for planning and control purposes. The project management discipline has responded to these unique and evolving challenges by developing various tools and techniques to assist project managers in the initiation, planning, execution, control and closing phases of project work (Fox and Spence, 1998; Hebert and Deckro, 2011; Project Management Institute, 2013; Project Management Zone, 2016). In this paper, we develop a project exercise for students that requires the use of one such tool to complete the task of building a dream home.

Our stakeholders tell us, among other things, that they would like our business students to have a fundamental understanding of the typical software applications used in business organizations today (e.g., word processing, database, and spreadsheet applications). In addition, for students in our undergraduate project management career track, our stakeholders have encouraged us to develop students' knowledge and skills in the use of project management software (Poston and Richardson, 2011). Since one goal of our project management career track is to prepare students to excel on the Certified Associate in Project Management (CAPM®) exam offered by the Project Management Institute (PMI) and in the career field upon graduation, we believe that knowledge of, and practice with, project planning and control software is essential to that purpose. Although there are many commercial project management software packages available (i.e., Primavera, Basecamp, Smartsheet), we have chosen Microsoft Project Professional® because it is one of the most popular, widely used project management software packages (Project Management Zone, 2016; Salas-Morera, et al., 2013) and because it is compatible with the other Microsoft Office® applications already in use in our business school.

THE DREAM HOME BUILD

We have heard from our students that project management subject matter can be dry. This experiential exercise was developed to provide a link between course instruction concerning project scope, schedule and cost, and a software application that helps students translate and apply that information to build observable and measureable knowledge and skills. We also think that helping to build a dream home, even for their college instructor, can be interesting and fun for students (the instructor plays the role of the project client). We structure the course that covers this material using the same sequence as that of the knowledge areas in PMI's Project Management Body of Knowledge (PMBOK®), and so we wait until we have introduced project scope management, project time (schedule) management, and project cost management in the course before introducing this exercise. The activities developed as part of the project (e.g., building walls, putting the roof on, plumbing and electrical work) are easy to understand/explain, and the "waterfall" nature of the dream home activities support the traditional, predictive life

cycle approach to project planning outlined in the PMBOK® (Project Management Institute, 2013: 44). We also wanted to develop an experiential activity that could be taught in instructor-led sessions or as a student self-directed learning activity. In our classes, we pair the exercise steps to chapters/sections of video instruction provided by our university online learning platform and video learning aid (Lynda.com). In other words, the instructions for the student self-directed activity would be similar to the exercise instructions given in Appendix 1, but would include a link to chapters/sections of the Lynda.com videos which discuss how to perform the operations requested in each step. In the self-directed version, we instruct the students to view the video associated with each step before attempting to accomplish the step requirements. If you have a similar online video learning resource available, we encourage you to modify the exercise instructions given in Appendix 1 to include those sections of the resource that support learning that material (Nagy and Bernschütz, 2016). Finally, we wanted to develop an exercise that covered the majority of the fundamental features and functions of the project management software in a relatively short time (3 hours) while reinforcing the material covered in our instruction of scope, schedule and cost.

EXERCISE STEPS

The exercise steps listed in Appendix 1 take the students through the fundamental elements of project planning and control, such as creating project tasks, sub-tasks and work packages, developing a work breakdown structure (WBS), sequencing project activities and developing the project schedule, and controlling the budget using earned value management (EVM). If the instructor is familiar with MS Project, the steps are fairly straightforward, and the steps/activities can be easily modified to suit the needs of the course/instructor. However, we detail (below, with screenshots of the MS Project file) the important elements of the project and why we developed the exercise to cover these elements.

Steps 1-5. Steps 1-5 require that the students create/save a Project file, insert the Dream Home task activities and task durations (from Exhibit 1), insert the project start date for the first activity, and indicate the precedence relationships (also from Exhibit 1) between project activities. The operations associated with these steps should be familiar to students who have a working knowledge of MS Excel because the workspace for MS Project looks and operates much like a spreadsheet. Also, as with most Microsoft programs, there is often more than one way to accomplish an operation (for instance, precedence relationships between activities can either be indicated using the "Link" button on the "Task" tab, or by creating a "Predecessors" column in the workspace and indicating the tasks which precede the selected activity). The screenshot shown as Figure 1 displays the MS Project workspace following the completion of Step 5. The project completion date at this point is 11/28/2017 (before the 1 December desired finish date). These activities support learning how to open/save a project file, insert project tasks and durations, and indicate activity precedence relationships.

Step 6. Step 6 is a critical step, as it requires students to insert/create sub-tasks and work packages (from Exhibit 2) into the task listing. This step can negatively affect subsequent steps if students do not properly indent task levels (from task to sub-task to work package level) or indicate the appropriate precedence relationships. This step supports learning about how to indicate summary (aggregation) and sub-task activities (disaggregation) within the project plan and supports the development of an appropriate WBS listing in Step 7. The screenshot shown as Figure 2 displays the MS Project workspace following the completion of Step 6.

Steps 7-8. Step 7 requires students to insert/create a column with a WBS numbering system. Step 8 requires that students insert project milestones (0 day/time duration activities) into the project file (Exhibit 3). These activities support learning about how to insert information columns into the working file and milestones or stage-gates into the project schedule.

Step 9. We included the requirements of Step 9 to get the students to experiment with the default settings of MS project and to practice changing the project working times (to account for a week of vacation/fishing in the project schedule). The screenshot shown as Figure 3 contains arrows showing the milestones created in Step 8 as well as the dialog box that appears when the "Change Working Time" function of the "Project" tab is selected. As will soon become evident, this change, as well as another project delay (a snow storm) will extend the planned project finish past 1 December. The screenshot shown as Figure 3 displays the MS Project workspace following the completion of Step 9.

Figure 1: Screenshot following Step 5

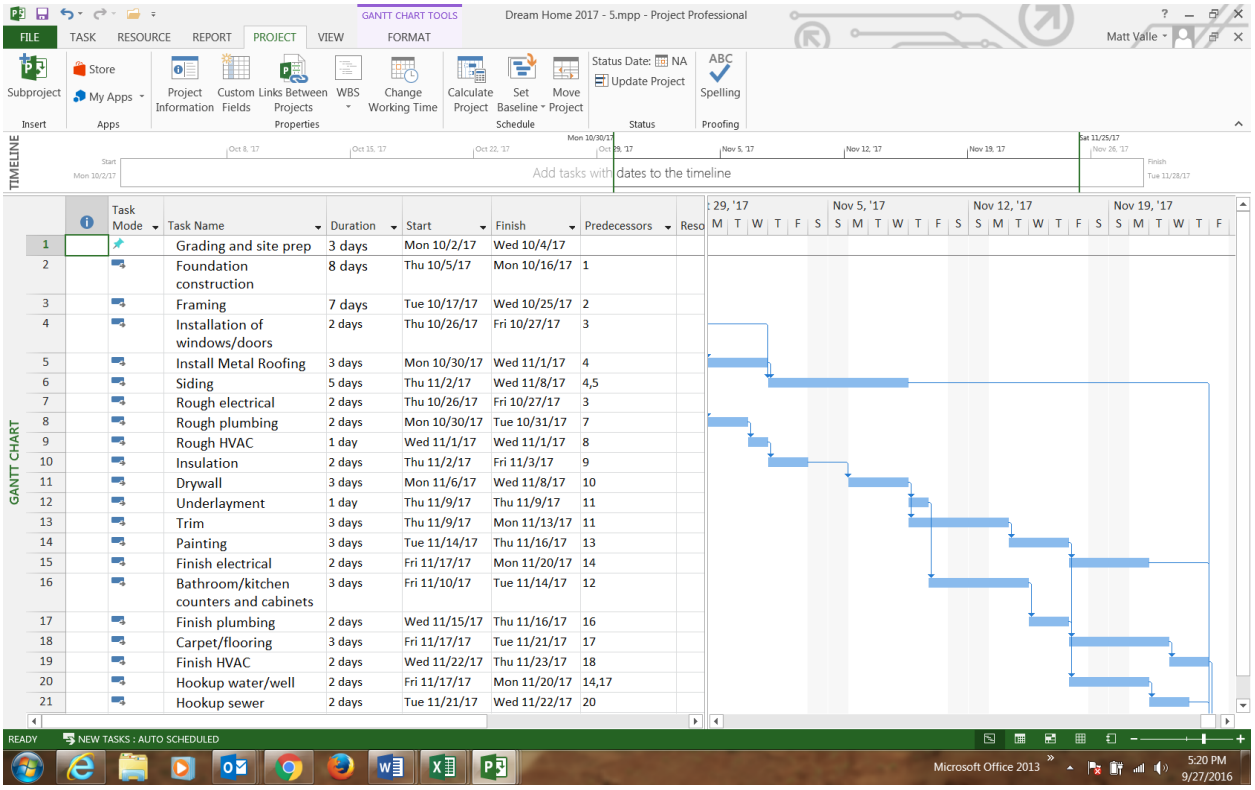


Figure 2: Screenshot following Step 6

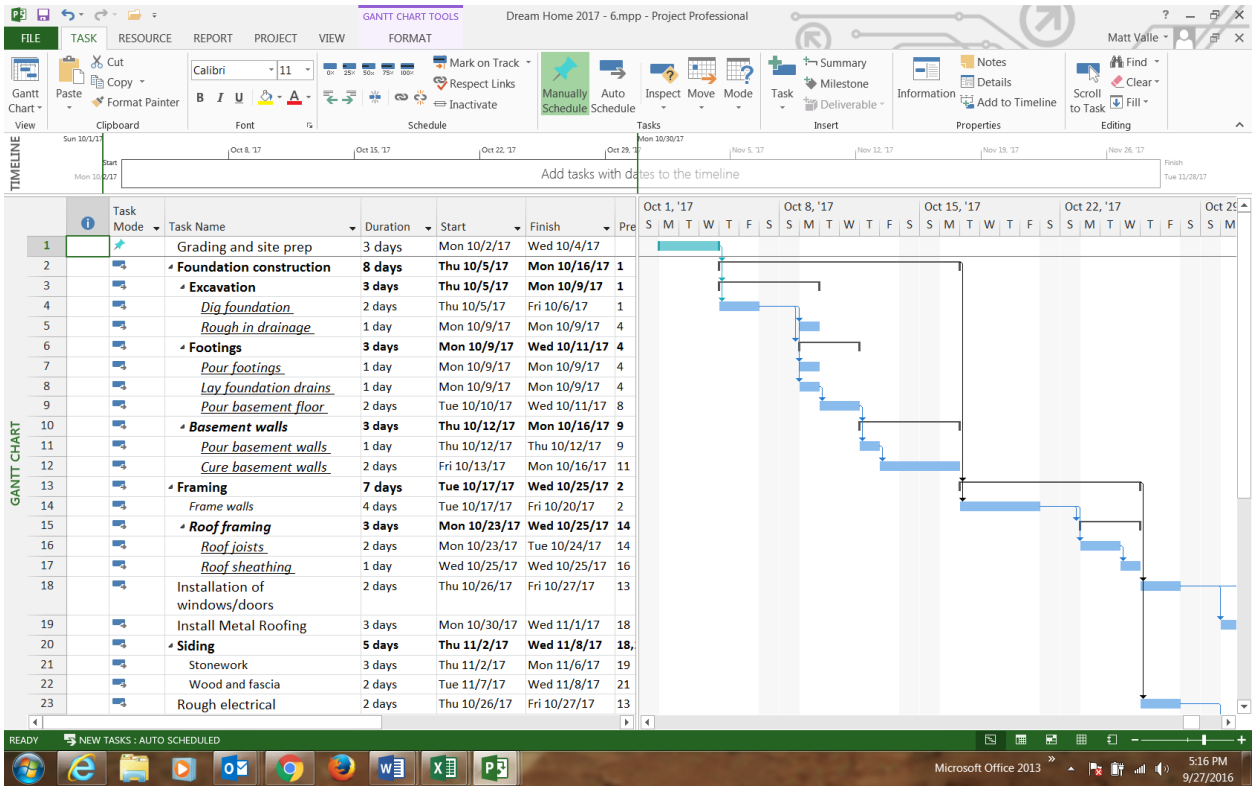
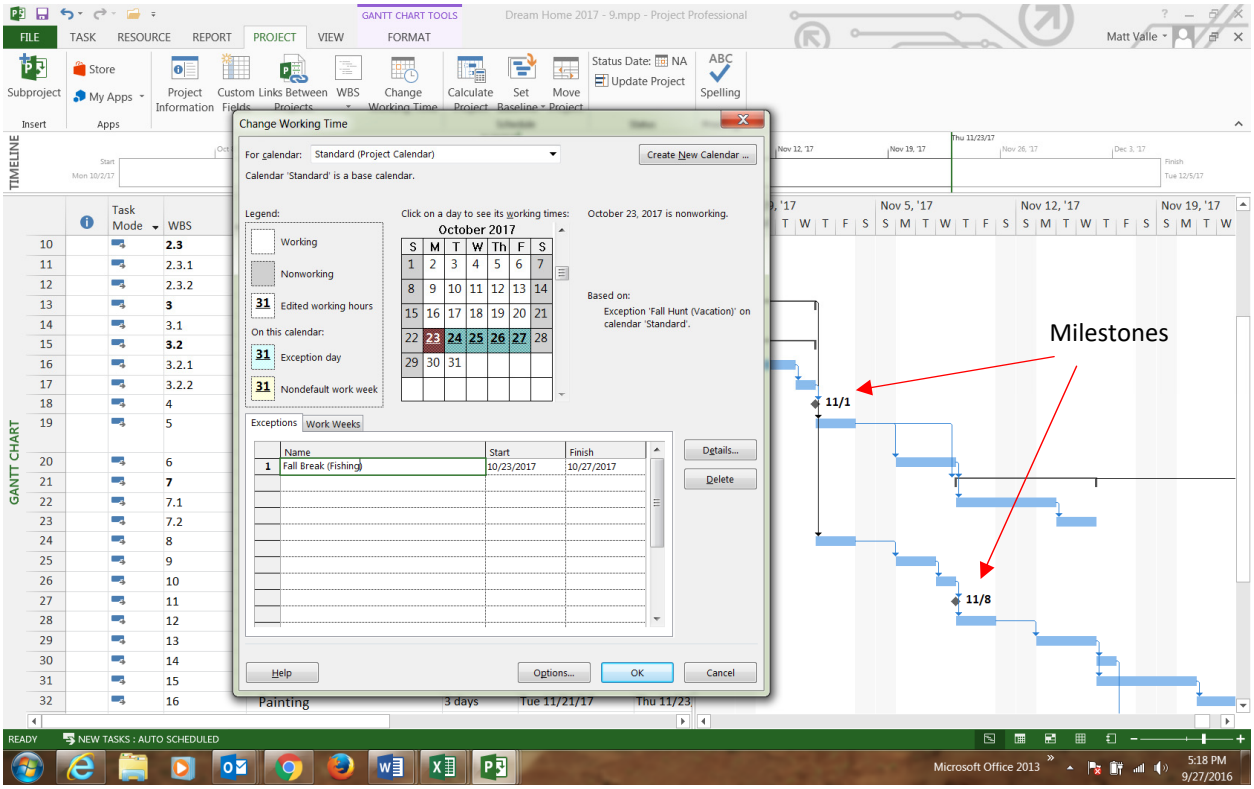
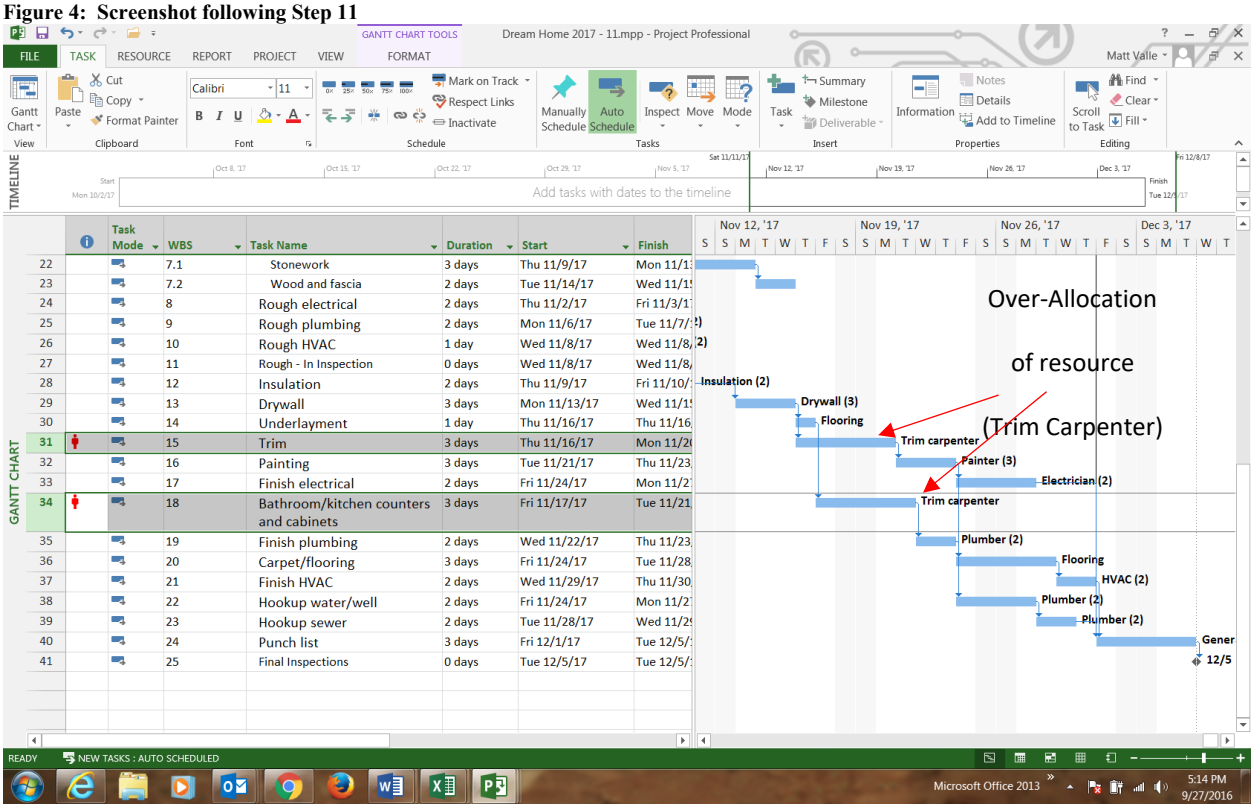


Figure 3: Screenshot following Step 9


Milestones
11/1
11/8
Change Working Time
For calendar: Standard (Project Calendar)
Create New Calendar ...
Calendar 'Standard' is a base calendar.
Legend:
Working
Nonworking
Edited working hours
On this calendar:
Exception day
Nondefault work week
Click on a day to see its working times:
October 2017
October 23, 2017 is nonworking.
Based on:
Exception 'Fall Hunt (Vacation)' on calendar 'Standard'.
Exceptions
Work Weeks
Name
Start
Finish
Fall Break (Fishing)
10/23/2017
10/27/2017
Details...
Delete
Help
Options...
OK
Cancel
Painting
3 days
Tue 11/21/17
Thu 11/23
READY
NEW TASKS : AUTO SCHEDULED
Microsoft Office 2013
5:18 PM
9/27/2016

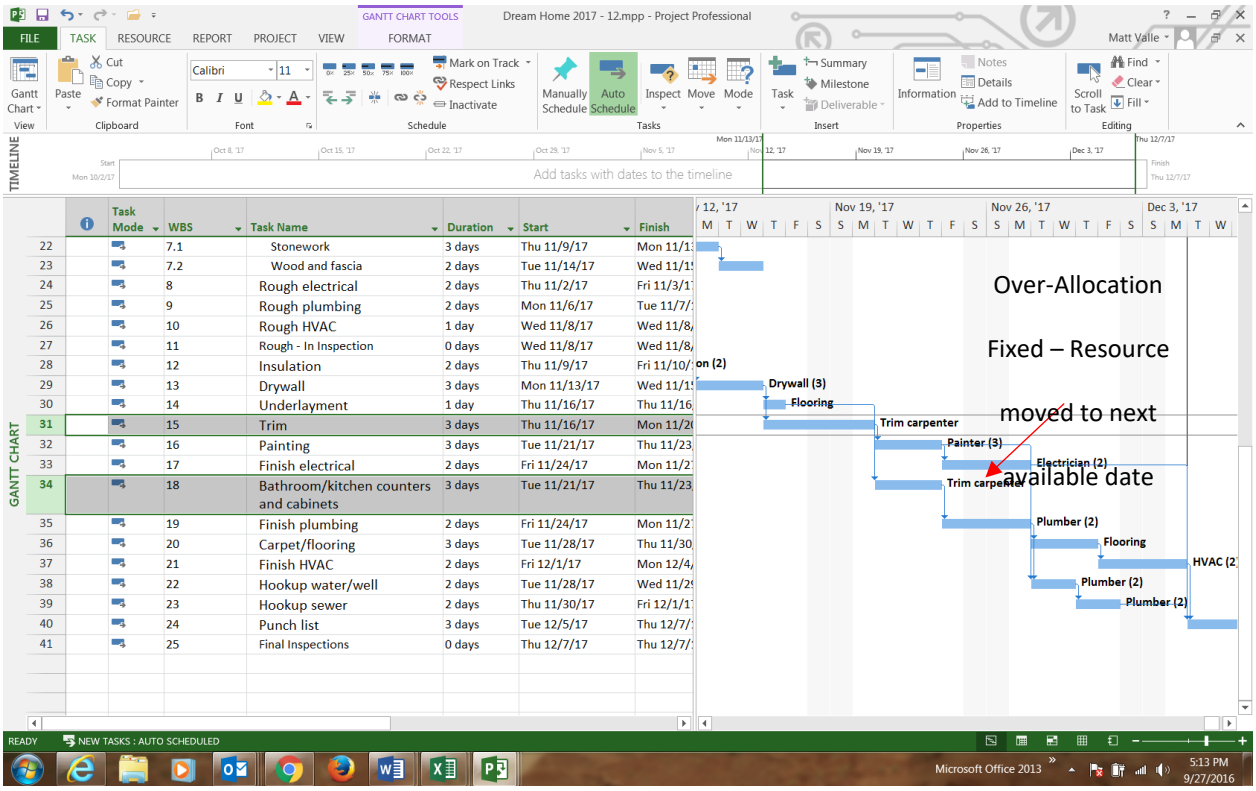
Steps 10-11. Step 10 requires the development of a resource sheet (personnel, material, and cost resources for the project – Exhibit 4). The resource sheet (shown under the "Resource" tab in MS Project) looks very much like an Excel spreadsheet; in fact, students can copy/paste elements of Exhibit 4 into the resource sheet in MS Project. Step 11 requires that the students assign resources (according to Exhibit 5) to project tasks/sub-tasks/work packages. By assigning resources to project activities, the program indicates which resources are assigned to which tasks and also stores cost information for each activity and for the entire project. This cost information (cost baseline) will be used later for control when the project is being executed. The screenshot shown as Figure 4 displays the MS Project workspace following the completion of Step 11. Notice how rows 31 and 34 display red figures (indications that a human resource, the trim carpenter, is incorrectly assigned to two tasks at the same time). This problem requires a subsequent adjustment and teaches the students the importance of understanding potential resource constraints.

Figure 4: Screenshot following Step 11



Step 12. Step 12 requires that the students work through alternatives for resolving the resource over-allocation from Step 11. The screenshot shown as Figure 5 displays the MS Project workspace following the completion of Step 12. We chose to delay the activity on row 34 until the trim carpenter (our good friend, "Bob") had completed the activity on row 31. Notice how the activity timeline bar (the Gantt chart) on row 34 has been moved back (delayed) until the trim carpenter completes the activity in row 31. Alternatively, we could have hired another resource, "Trim Carpenter #2 - Jane", and assigned that resource to the activity on row 34. That would not have delayed the project…but it may have made our friend Bob unhappy. The students should understand that project decisions about constraints are often associated with trade-offs.

Figure 5: Screenshot following Step 12



Step 13. Step 13 requires that the students save a baseline for the project. The baseline assumes that the project plan is essentially "set" (scope, schedule and cost baselines are final). Notice that at the very bottom of the display in Figure 5, row 40 (one of the final project activities, the "punch list") is scheduled to be complete on 12/7, seven days after our requested project completion date. This was due to the fall vacation (fishing) and the resource over-allocation for the Trim Carpenter. The PM is going to have to make some adjustments… Given the project baselines, we then have the students set the status date (simulating that the project is being executed and the current date is 6 November, approximately half-way through the dream home build). As such, we also require the students to indicate activity progress by marking some project activities as 100% complete, while others are less than 100% complete (as of 11/6) due to a snowstorm at the jobsite. It is at this point that we require the students to evaluate project progress using EVM metrics. We require the students to create earned value columns, interpret those values, and create an earned value display (since MS Project is synced to MS Excel, the generation of an EVM chart is easily accomplished). The screenshot shown as Figure 6 shows the dialog box that is displayed when the student requests a "Visual Report" under the "Report" tab. Figure 7 shows the resulting MS Excel chart generated by the "Earned Value Over Time Report" request. Notice how the Actual Cost line (the bottom line) and the Earned Value line (identical to/under the AC line) are below the Planned Value line (the top line). This indicates the project is behind schedule in (calendar) weeks 44 and 45.

Figure 6: Screenshot following Step 13

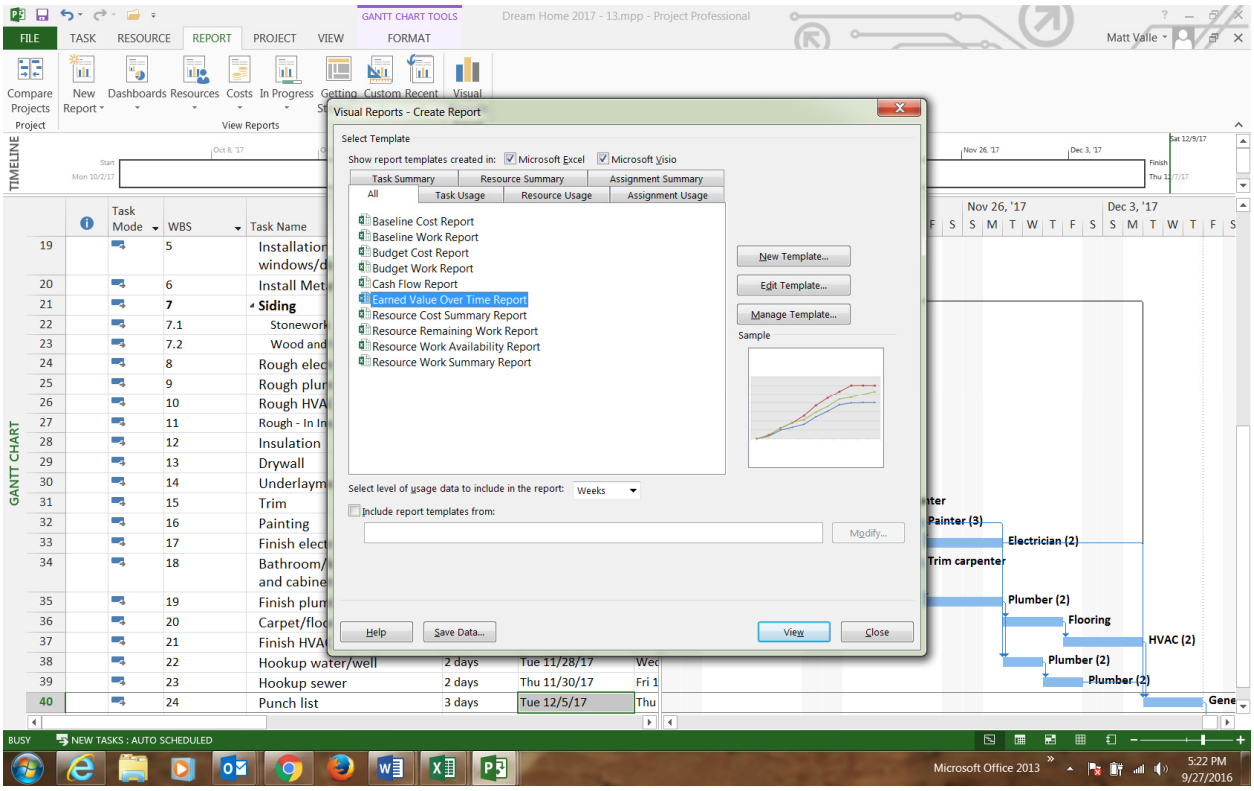
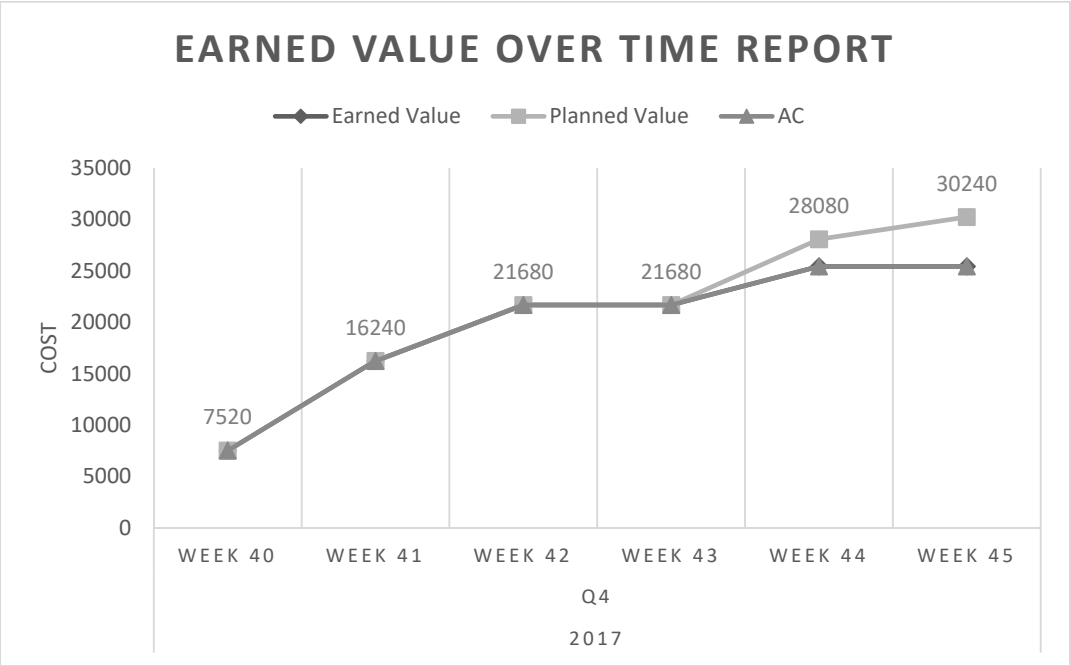


Figure 7: Screenshot of "Earned Value Over Time Report" request



Step 14. Step 14 takes the information from Step 13 (that the schedule variance is negative, and the project is behind schedule) and requires that the students figure out a way to adjust the activities remaining to get the client in the dream home on 1 December. In the past, we required students to compress the remaining project schedule in MS Project so as to speed up the remaining activities. However, if was difficult to review the resulting file and determine what the students had changed. Therefore, we ask the students to tell us (in the email with their file submission) what they would do to compress the remaining activities in the project to meet the planned project finish date. Ideally, students describe how they would note the critical path activities in the project (from 6 November to 7 December) and then "crash" the project by adding to those crews/activities at the lowest cost possible. However, other suitable schedule compression activities are possible, and it is interesting to see how the students meet this typical project challenge.

CONCLUSION

We have found this exercise to be extremely helpful in teaching project planning and control software, and in reinforcing course material about scope management, schedule management and cost management and control. While we did not ask about this exercise specifically, unsolicited student feedback from undergraduates and MBA's (recorded in official student teaching evaluations) suggests that working on this applied exercise was both fun and effective. Student comments included remarks such as "The MS Project exercise was helpful for learning practical, useful software for my industry" and "…Project was immediately applicable in my current job" (verbatim comments from MBA students); "…I appreciated the exercise for MS Project because it allowed me to apply the material from the textbook…" and "…the MS Project exercise was a great way of reinforcing the fundamentals…" (verbatim comments from undergraduate students). Further validation comes from anecdotal reports from undergraduate and MBA students who have interviewed for project management jobs. They tell us that listing experience and proficiency with MS Project Professional on their resume elicits remarks from interviewers and starts conversations about the project software in use at the company. It appears that this indication of skill development (in MS Project) may act as a signal to employers that the candidate is committed to learning the skills necessary to be effective as a project manager. Instructors in project management classes may also find this exercise useful for teaching the fundamental concepts of Microsoft Project in a condensed format, either as an instructor-led learning activity or as a student self-directed learning exercise. Additionally, we would welcome requests from interested instructors for our model project files (the screenshots of which are displayed in this article). As we have found, the essential elements of the project management triangle (scope, schedule and cost) become tangible, and more memorable, to students who envision building this dream home.

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APPENDIX 1

"Dream Home" Project

Thank you for agreeing to serve as the project manager for the construction of my dream home. We have contracted with ACME Custom Builders, L.L.C., to build the home on a lot that my spouse and I purchased. The builder has given us an estimate of the building task sequence and durations (Exhibit 1). The builder works with a number of trade crews and tells me that she can schedule the crews on an "as needed" basis in order to bring projects in on time. Based on the builder's estimate of work/activity durations, we have set a tentative occupancy date of 1 December, 2017. She suggests a start date of Monday 2 October 2017 (remember, this is a *dream* home!). In any case, you should be able to commence grading and site preparation on 2 October. The builder has given us (you) a list of tasks that need to be accomplished, as well as information on the trade crews she uses, costs, etc. Use the information from the Exhibits provided and MS Project Professional to accomplish the following tasks:

1. Create a MS Project Professional file (.mpp) and name it using the following convention **- ("Your Last Name")(Space)("PM")(Space)("2016")**. An example would be "Smith PM 2016.mpp". If you are new to MS Project, it is suggested that you save successive files of your work with different file names as you proceed – that way, if you make a mistake that you cannot undo, you can go back to a previous file and start from there without having to recreate the entire file from the beginning. You will prompted in these instructions when we think you should save your *working* file. It is also suggested that you follow the sequence provided in steps 2-14 (below) to avoid logic errors in the construction of the MS Project network.
2. Populate the "Task Name" column with the task names provided in Exhibit 1. We will add Subtasks and Work Packages later.
3. Populate the "Duration" column with the activity duration times from Exhibit 1. We will use the default (standard) project calendar in MS Project (5 day work week).
4. Insert the project start date (2 October, 2017) in the "Start" column corresponding to the first task activity ("Grading and site prep"). You can leave this task as "Manually Scheduled." Select "Automatically Scheduled" in the Task Mode column for all successive activities.
5. Exhibit 1 gives you information on the durations and precedence relationships (task dependencies) of the building task activities. For example, the framing must be completed before the windows and doors can be

installed (this makes sense). In your project file, link task activities based on the precedence relationships given in Exhibit 1 (be careful: most task activities have one predecessor, but some task activities have more than one predecessor). **Save a copy of this file as ("Your Last Name")(Space)("PM")(Space) ("2016")(Space)("Task List")**.

6. Exhibit 2 gives you information on the durations and precedence relationships (task dependencies) of the tasks, subtasks and work packages for the Task Activities **foundation construction, framing,** and **siding**. In this exhibit, task activities are listed in **bold** type; subtasks are listed in regular type; work packages are listed in *italics and underlined*. For example, the **foundation construction** task consists of the excavation, footings and basement walls subtasks, and the excavation subtask consists of the *dig foundation* and *rough in drainage* work packages. In your project file, link the subtask and work package activities based on the precedence relationships given in Exhibit 2. Subtasks and work packages should be automatically scheduled based on the precedence relationships. **Save a copy of this file as ("Your Last Name")(Space)("PM")(Space)("2016")(Space)("All Tasks")**.
7. Create a column to the left of the "Task Mode" column and insert WBS codes/field into that column. **Save a copy of this file as ("Your Last Name")(Space)("PM")(Space)("2016")(Space)("WBS")**.
8. Create Milestones in your project file based on the milestone information in Exhibit 3.
9. Your builder (General Contractor) tells you that she and her crews are going to take Fall Break (to go fishing) from Monday, October 23, 2017 to Friday, October 27, 2017. Adjust your project calendar to indicate that that week is a non-working week. **Save a copy of this file as ("Your Last Name")(Space) ("PM")(Space)("2016")(Space) ("Fishing")**.
10. Create a Resource Sheet like the one included as Exhibit 4. Some of the resources are work resources (personnel), some are material resources, and one is a cost resource. Some of the resources are grouped as teams (for example, the "Grading Crew" has 3 individuals assigned to it). If the resource is a team of 2 or more individuals, the standard cost (hourly rate) is based on the cost of all individuals in the team (if you use the Grading Crew for 1 hour, it will cost you $180 - If you work them overtime, it will cost you double time, or $360. Each individual worker on that team is paid $60/hour standard, $120/hour overtime). Some individuals or teams charge double overtime, some time-and-a-half, and so on.
11. Assign the work resources listed in Exhibit 5 to their corresponding tasks. In addition, assign 10 cubic yards of concrete each to the pour footings, poor basement floor and pour basement walls work packages (this is an example of using the assign [materials] resource feature). **Save a copy of this file as ("Your Last Name")(Space)("PM")(Space)("2016")(Space)("Resources Assigned")**.
12. Note where you have over-allocations of resources. Work through your options regarding how to fix these over-allocations. (Hint: You can "add" resources – hire additional crews – to complete the work, assign additional resources to complete the work previously assigned to a single resource, or adjust the schedule – level resources - to allow the assigned work crews the time they need to complete all tasks/subtasks/work packages). Make the changes you think are necessary to resolve the resource over-allocations. **Save a copy of this file as ("Your Last Name")(Space)("PM")(Space)("2016")(Space)("Resources Fixed")**.
13. Save a Baseline for your project file. **Save a copy of this file as ("Your Last Name")(Space)("PM") (Space)("2016")(Space)("Baseline")**. Next, in your project file, set the status date to 11/6/17. Highlight the tasks from "Grading and site prep" to "Roof sheathing" and mark the selected tasks as 100% complete. Assume that there was a bad snowstorm and little work was done on the tasks "Installation of doors/ windows" and "Rough electrical" - mark those tasks 25% complete. Create earned value columns (PV, EV, AC, SV, CV) in your project file. Review those columns and visually determine the differences between the Planned Value and the Earned Value for the two activities that are behind schedule. View the "Earned Value Over Time" visual report. Notice where the Planned Value, Earned Value and Actual Costs lines are/should be (and why they are where they are). Again, since you are only behind on two tasks, the deviation (schedule variance) will be rather small. Question: Is your schedule variance positive or negative, and what does that mean? **Save a copy of this file as ("Your Last Name")(Space)("PM") (Space)("2016")(Space)("EVM")**.
14. Look at your project at the "current" status time (11/6/17). When is the (new) scheduled finish date? Given that the client (me) wants to occupy the house on 1 Dec, what options do you have available in order to meet that schedule? What would you do to meet that schedule (hint: look at the critical path/critical tasks in the network – if you are going to spend money to compress the project schedule, what is the best use of that extra cash?). Tell me what your plans are to meet the project deadline. **Save a copy of this file as ("Your Last Name")(Space)("PM")(Space)("2016")(Space) ("Final")**. Send me this final file as an attachment to email (instructor@university.edu). Include in your email answers to the questions I have

asked in items 13 and 14.

Good luck!

Exhibit 1

Tasks	Task Name	Duration	Follows Task(s)
1	Grading and site prep	3 days	-
2	Foundation construction	8 days	1
3	Framing	7 days	2
4	Installation of windows/doors	2 days	3
5	Install Metal Roofing	3 days	4
6	Siding	5 days	4, 5
7	Rough electrical	2 days	3
8	Rough plumbing	2 days	7
9	Rough HVAC	1 day	8
10	Insulation	2 days	9
11	Drywall	3 days	10
12	Underlayment	1 day	11
13	Trim	3 days	11
14	Painting	3 days	13
15	Finish electrical	2 days	14
16	Bathroom/kitchen counters and cabinets	3 days	12
17	Finish plumbing	2 days	16
18	Carpet/flooring	3 days	17
19	Finish HVAC	2 days	18
20	Hookup water/well	2 days	14, 17
21	Hookup sewer	2 days	20
22	Punch list	3 days	6, 15, 19, 21

Exhibit 2

Task Sub-Task *Work Package*	Duration	Follows Task/Subtask/Work Package(s)
Foundation construction	8 days	Task: Starts when "grading and site prep" task is complete
Excavation	3 days	First Sub-Task: Starts when "grading and site prep" task is complete
Dig foundation	2 days	First Work Package: Starts when "grading and site prep" task is complete
Rough in drainage	1 day	Second Work Package: Starts when "dig foundation" WP is complete
Footings	3 days	Second Sub-Task: Starts when "dig foundation" WP is complete
Pour footings	1 day	First Work Package: Starts when "dig foundation" WP is complete
Lay foundation drains	1 day	Second Work Package: Starts when "dig foundation" WP is complete
Pour basement floor	2 days	Third Work Package: Starts when "lay foundation drains" WP is complete
Basement walls	3 days	Third Sub-Task: Starts when "pour basement floor" WP is complete
Pour basement walls	1 day	First Work Package: Starts when "pour basement floor" WP is complete
Cure basement walls	2 days	Second Work Package: Starts when "pour basement walls" WP is complete
Framing	7 days	Task: Starts when "Foundation construction" task is complete
Frame walls	4 days	First Sub-Task: Starts when "Foundation construction" task is complete
Roof framing	3 days	Second Sub-Task: Starts when "frame walls" sub-task is complete
Roof joists	2 days	First Work Package: Starts when "frame walls" sub-task is complete
Roof sheathing	1 day	Second Work Package: Starts when "roof joists" WP is complete
Siding	5 days	Task: Starts when "Installation of windows/doors" and "Install metal roofing" tasks are complete
Stonework	3 days	First Sub-Task: Starts when "Installation of windows/doors" and "Install metal roofing" tasks are complete
Wood and fascia	2 days	Second Sub-Task: Starts when "Stonework" sub-task is complete

Exhibit 3

Milestones for CO Project House

Milestone 1	Dry In - Inspection	Link to completion of "Roof sheathing" WP
Milestone 2	Rough-in Inspection	Link to completion of "Rough HVAC" task
Milestone 3	Final Inspections	Link to completion of "Punch list" task

Exhibit 4

Project Resources

Resource Name	Type	Initials	Max. Units	Std. Rate	Ovt. Rate
Grading crew (3)	Work	Grade	100%	$180.00/hr	$360.00/hr
Concrete crew (4)	Work	Concrete	100%	$200.00/hr	$300.00/hr
Framing crew (4)	Work	Framers	100%	$120.00/hr	$180.00/hr
Roofing crew (3)	Work	Roofers	100%	$150.00/hr	$225.00/hr
Electrician (2)	Work	Elec	100%	$100.00/hr	$200.00/hr
Plumber (2)	Work	Plumb	100%	$120.00/hr	$240.00/hr
HVAC (2)	Work	HVAC	100%	$80.00/hr	$160.00/hr
Insulation (2)	Work	Insul	100%	$60.00/hr	$90.00/hr
Drywall (3)	Work	Drywall	100%	$75.00/hr	$150.00/hr
Flooring	Work	Flooring	100%	$25.00/hr	$25.00/hr
Painter (3)	Work	Paint	100%	$90.00/hr	$135.00/hr
Trim carpenter	Work	Trim	100%	$50.00/hr	$75.00/hr
Concrete mix	Material	Mix		$24.00	
2x4x8	Material	lumber		$3.00	
4x8 OSB	Material	OSB		$12.00	
Nails	Material	Nails		$4.00	
Catering	Cost	Cater			
General Contractor	Work	GC	100%	$200.00/hr	$200.00/hr

Exhibit 5

Grading and site prep	Grading crew (3)
Foundation construction	Concrete crew (4)
Framing	Framing crew (4)
Installation of windows/doors	Framing crew (4)
Install Metal Roofing	Roofing crew (3)
Siding	Framing crew (4)
Rough electrical	Electrician (2)
Rough plumbing	Plumber (2)
Rough HVAC	HVAC (2)
Insulation	Insulation (2)
Drywall	Drywall (3)
Underlayment	Flooring
Trim	Trim carpenter
Painting	Painter (3)
Finish electrical	Electrician (2)
Bathroom/kitchen counters and cabinets	Trim carpenter
Finish plumbing	Plumber (2)
Carpet/flooring	Flooring
Finish HVAC	HVAC (2)
Hookup water/well	Plumber (2)
Hookup sewer	Plumber (2)
Punch list	General Contractor

Teaching By Design Using a Question Template To Transform Student Writing

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ABSTRACT

The purpose of this article is to suggest teacher's use design thinking to create question-based assignments to transform student writing.

The problem is that it is difficult to teach someone something they think they already know. Students have learned one mindset, one normal path for writing papers and when faced with a new method challenging them to try a new and different path they are resistant.

My method for breaking through this resistance was to create a question-based template that focused on teaching a method best for creativity. The template was based on three different stages of inquiry, why, what and how. The template was designed to cue the brain to cycle through different regions of the brain. Each week a student was assigned one of twelve management topics concerning a top innovative company. The student was to use the question template to answer all the questions. The research study was 10 semesters with a total of 295 students completing 3,540 papers. The papers were reviewed, evaluated and ranked by the quality of the answers. A Goldilock's formula using the paper's word count was used to measure and identify the "just right" number of words used by each student to complete the assignment. The results: approximately 80 percent of the students showed little or no change in their writing, 10 percent of the class writing was greatly improved, and 10 percent of the students' writing was deficient.

The conclusion reached was that the use of a question template was most effect for a student who was willing to put in the time and effort to research and think through all the questions to provide a holistic answer. The use of a word count as a measure was helpful in providing feedback for the purpose of communicating to the student's suggestions and examples for improvement. The questions that sought personal feedback concerning the "walk away" message, the lessons learned, and what was cloudy or unclear about the assignment were helpful for re-designing the model.

Keywords: design thinking, template, creativity, integrated thinking, Goldilock's formula, teaching method

INTRODUCTION

The Darwinian world is a world based on operational efficiency. Evolution is an algorithm where survivors survive because they are the most efficient at solving life's problems. Nature's design algorithm is based on the principle of least effort. Surprisingly, when it comes to people and written communication the principle of least effort is at work. George Zipf wrote *Human Behavior and the Principle of Least Effort* in 1949, theorizing that people have a tendency to communicate with the least effort and this theory is known as Zipf's Law (Zipf, 1949 Viii).

In designing the question template Zipf's Law was a concern. Cognitive psychologists have written in depth about the brain's ability to use the least amount of energy to store and process large amounts of information. For maximum efficiency the brain takes a minimalist approach and uses redundancy to store information in different regions of the brain.

Consequently, the principle of least effort is critical to consider in the teaching by design process. It is this principle that drives the brain to create different mindsets for solving different problems. The human brain has the ability to learn most any task. When the brain is faced with a problem that it needs to solve it will create the mental circuitry until it can accomplish the task with maximum efficiency. This clever tactic accomplished two things of chief importance for survival. The first is speed for fast decision-making. The second is energy efficiency. The brain is always searching for ways to minimize the energy required to solve problems (Eagelman, 2011 p. 71-72).

In 2004, Roger Martin, dean of the Rotman School of Business at the University of Toronto, presented a new paradigm for business by asserting that all business people need to become design thinkers. In his seminal 2009

book The Opposable Mind, Martin's message was that business people to build new and better models to drive creativity and innovation (Martin, 2004) (Martin, 2009 p. 99).

In 2009, Tim Brown, the CEO and president of IDEO, one of the most innovative companies in the world, in his definitive book, *Change By Design*, presents design thinking as a way of not only seeing the world but also as a method to apply constraints (Brown, 2009).

In the book *Nudge,* Richard Thaler and Cass Sunstein presented the idea that when it comes to decision-making there is no such thing as a neutral design. Doctors design treatments, sales people design displays and teachers design assignments. The authors call the people who have the responsibility for organizing the context in which people make decisions *choice architects.* Simply put any person who designs the context for influencing how one thinks or decides when making a choice is actually a design thinker (Thaler & Sunstein, 2009).

In 2003, best selling author Peter Block, suggests *The Answer to How is Yes*. Block believes that creativity and transformation comes more from pursing profound questions than seeking practice answers. Moreover, he expresses the idea that there is something in asking the persistent question of how.

In 2015, Adam Morgan, coauthor of A Beautiful Constraint, presented the value of using propelling questions to drive creativity. A propelling question is a question that requires a person to use integrated thinking to connect two different ideas together. It simply propels the user of the path of normalcy onto a new path of transformation.

> *There is a depth in the question, "How do I do this?" that is worth exploring. The question is a defense against the action. It is a leap past the question of purpose, past the question of intention, and past the drama of responsibility. The question "How?"-More than any other question-looks for the answer outside us. It is an indirect expression of doubts…*
>
> Choosing Freedom, Service and Adventure,"
> -Peter Block, *Stewardship*, (p. 234)

USING A TEMPLATE WRITING A STORY

Tina Selig, best selling author and the executive director of the Stanford Technology Ventures Program, is a strong advocate for using a template for increasing student creativity. Dr. Selig, in her book *Insight Out* explains how the skills of creativity and innovation can be learned and taught to every student (Selig, 2015). Selig is a great believer in story templates as a teaching method. Companies as well as individuals have stories and if a company's story is interesting it will generate publicity and support from the public.

All companies have stories and successful companies have a clearly articulated story that presents a clear and well thought out business strategy. At the core of each business and each story is a structure that Selig calls the "story spine" structure. By using this structure as a template for writing a paper or doing a project, the teacher can greatly increase not only what to do but how it should be done.

USING A QUESTION TEMPLATE FOR WRITING ASSIGNMENTS

The template idea works in almost every situation. Stories are the building blocks of company culture and provide a solid structure for student writing assignments. A question-based template works in most situations to provide structure and process to a writing situation. Consequently, the idea for changing a story template into a question-based template for analyzing innovative business companies was created and implemented into an upper division course in principles of management.

DESIGNING THE QUESTION TEMPLATE-STRUCTURE, PROCESS AND FEEDBACK SYSTEM

Start by using a curiosity-creating question that sets the stage for the list of questions that will follow. The question that I prefer to use is "Why is this a challenge?"

The second step is to create a framework of questions based on three different levels of information requiring the student to use an integrated thinking approach.

Why Questions-direct curiosity
What Questions-direct knowledge
How Questions-direct solutions

In 1949, the British philosopher Gilbert Ryle distinguished between knowing how, (the knowledge of skills) and the knowing of what (knowledge of facts and events). More recently, a team of researchers at UCLA discovered that participants who were asked both how and why questions during a magnetic resonance session showed different parts of the brain responding. The how questions engaged the left-brain circuitry and the why questions engaged the right hemisphere (Ryle, 1949).

The conclusion was that a well-constructed question-based template requires a what, a how, and a why questions for whole-brain engagement. The student needs to use integrated thinking to answer all the questions. This idea of providing multiple points of view was expressed by Alan Kay, noted Apple fellow who was quoted to say, "A change in perspective is worth 80 IQ points."

ELEMENTS OF THE PROCESS: TWO CRITICAL QUESTIONS

The language of the framing questions is accomplished by using two "why questions." The first question is "Why is the Challenge Here?" The second question is "Why is this important? The purpose of these questions is to establish a frame for curiosity.

Question-based template for a Business Management Class

The Topic is Strategy The Company is Google

Why Questions (curiosity)

Why is this a challenge?

Why is this Important?

Why is this Valuable?

What Questions (knowledge)

What is special about how they handle this topic?
What was the limiting factor?
What surprised you?

How Questions (solutions)

How do they handle this topic?
How do they motivate the company members?"
How do they communicate?

Student Feedback Questions (engagement)

What is the Walk Away Message?
What is the Lesson Learned?
What is Cloudy or Clear?

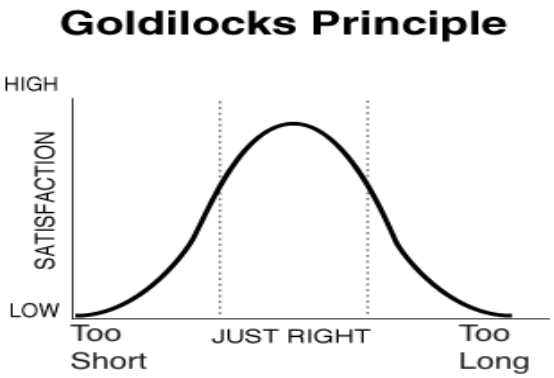
Measurement Questions (feedback)

What is the Word Count?
What are the Sources?

USING A GOLDILOCKS' FORMULA TO MEASURE STUDENT EFFORT AND TO PROVIDE FEEDBACK FOR IMPROVEMENT

The Goldilocks principle is derived from a children's fairy story "The Three Bears" in which a little girl named

Goldilocks finds a house owned by three bears. Each bear has its own preference of food and beds. After testing all three examples of both items, Goldilocks determines that one of them is always too much in one extreme (too hot or too large), one is too much in the opposite extreme (too cold or too small), and one is "just right".



The purpose of the formula was to use the word count as a means for directing the students to either increase, decrease, or maintain the quality of their answers.

The plan was to do this with a minimum set of instructions given through class emails and the use of a series of templates and a checklist, with the intent of having the students become more self-directed, self-organized and self-motivated. I wanted the students to be more open and more engaged in their writing by using personal examples and opinions about the value and the difficulty of the assignments. A common problem in my previous online class was the constant requests by students concerning the length of the paper, how many sources, how many examples, and how could they improve their papers to achieve a perfect score.

Each paper was required to have a word count posted at the end of the paper. The purpose of the word count was to provide research data so that I could learn the average word count for each assignment. Then, after each completed assignment I would email the class the average word count, the average score and suggestions for improving the papers. The method for measuring word count was by *the wisdom of crowds*, mainly the collective opinion of the class (Surowicieki, 2004). This principle was the same principle that Google used to determine the effectiveness of their search results (Brandt, 2011 p. 117).

My expectation for the end result would be the word count graph resulting in a U-shaped distribution known as the *Goldilocks effect*. My expectation was that I could use the Goldilocks effect as a measuring device to determine the effectiveness of the design for the papers and to provide suggestion for either adding more information or for deleting extra information.

USING THE RULE OF 200

The Rule of 200 is a sports heuristic that I learned when attending a coaching clinic. The speaker spoke on his experience of scouting and selecting a player for a team. His idea was to study over 200 plays to get a feel for the quality of the player. He also suggest that this rule may be applied to most any sport or activity, that 200 was the minimum number that was needed to determine if the player was a top talent. I adopted the idea in the fall of 2015 and started to review 200 papers to find the “best paper” within the 200. It was not difficult to find the top ten papers.

At this point I had three simple rules: the paper had to be entertaining, the content had to flow seamlessly from one question to the next and there could be no duplication, extra words, extra ideas, or scattered content. Once I had selected the final two papers, I contacted the students and interview them about their techniques and methods. Additionally, asking their permission to use parts of their papers to be posted as examples for future students.

Finally, the Rule of 200 provided me with the discovery that the class could be divided into three types of students: the bottom 20 students were named reducers, the next 80% were named satisfiers, the top 20% were named

transformers, and the top 5 students were labeled "Star Quarterbacks." It was from these outliers that I learned what to do and what not to do in the design for future classes.

THE PURPOSE OF DESIGNED REDUNDANCY

Students often complain that the questions in the writing assignment are redundant. Redundancy and efficiency are two repelling concepts where redundancy is often associated with inefficiency. The questions are redundant but they are designed that way. The idea is to maintain a balance between redundancy and efficiency. Building in redundancy is crucial to ensuring continuity and effectiveness in business operations, rocket launches, and writing assignments.

Redundancy is a means of repetition that connects ideas and improves understanding. Cognitive psychologist George Miller of Princeton argues that the number of topics or objects that an average human mind can hold in memory is 7, plus or minus two. This idea is referred to as Miller's Law. By using a story question-based template that requires the student to answer a question from 7 different points of view, the result is the student is required to engage different regions of the brain (Miller, 1956).

Eric Kandel, neuroscientist and winner of the Noble Prize for his work on memory, demonstrated that different regions of the brain are specialized for different purposes. Asking, what is something, and, how to do something, requires thought from different regions of the brain. By using a model design the teacher can require the students to engage more than one region of the brain. Short-term memories are not only stored separately but they are stored in more than one region of the brain. The answers to the questions need to be integrated together to create a holistic solution (Kandel, 2006).

ASSURANCE AND REVIEW OF LEARNING

The objective of this paper is to present a new method that not only improves student's writing but also their creativity. By using design thinking teachers will accomplish a fundamental change in how they teach. Creative writing is a mindset and when design thinking is applied to education, the result is what Thomas Kuhn labeled a paradigm shift (Kuhn, 1956).

The first step for the teacher is to establish in the student's mind that something is possible and then probability will occur. When fellow colleagues hear that students taking the class are required to write a series of papers that average approximately 1000 words their reaction is they will have a difficult time completing the work. In short, they are skeptical and question the validity of the assignment. It is a major challenge to have other teachers try this method.

From the fall of 2014 through the fall of 2016, 295 students completed the Principles of Management online class. During that time each student was required to complete a series of 12 papers focused on a company and the application of material from the textbook, the internet and other sources. During this period 3,540 papers were reviewed and evaluated based on quality and creativity.

At the end of the first year the average length of the papers was 935 words. At the end of the second year the average length of the papers was 955 words. Starting in spring of 2016, there was some adjustment on the wording of the questions and the Cloudy or Clear was added. At end of the spring and summer class the average word count moved up to 1005 words. A review of the class achieved by interviewing students and receiving feedback from the Course Management System comments showed that the increase in the word count was due to improved feedback given through emails and comments made through the course management system.

Eric Kandel's research on memory and learning showed that repetition is the key to learning. Practice not only makes permanent as shown by the Nobel winner's research on learning, repeated practice also makes permanent. Information in short-term memory moves into long-term memory (Kandel, 2006).

By using the same model for every assignment each week the task of writing became easier. By building in redundancy the questions were easier to answer and examples both from references and from personal experience of the students were more accurate and engaging. Repetition not only makes perfect, it also makes permanent.

Perhaps, the most valuable information came from the student engagement questions: "What is the walk away message?" What is the lesson learned?" and "What is cloudy or clear?" This information provided the data for

making adjustments to the model not only during the semester but for the next semester's classes.

WHAT THE STUDENT LEARNS

The student learns that by using a question-based template the task of writing becomes easier with each repetition. By writing all of the papers on one company and by understanding that creation of each company is like baking a cake, you have to have all the ingredients in the right proportions and then the "heat" of the business environment will do the rest. Moreover, when a company like Google, Apple, or Microsoft has a breakthrough it is not one thing, but a series of things that are integrated and come together to create the innovation. The student learns the value of a story based on structure and most importantly the importance of a feedback loop where the student is constantly thinking about what they have done and how they could do it better.

The student learns the importance of process, a series of actions taken in order to achieve a particular end. It was our objective to design an assignment where the students not only learned the process of what makes a "great company" but also the process of what makes a quality paper.

Finally, the student learns that to iterate on each paper and at the end of the semester they have a design that if followed will produce an interesting paper with a theme, structure, and flow.

WHAT THE TEACHER LEARNS

The teacher learns that students work better when they know what the goal of the assignment is and why. Students perform better when they see the value in the assignment and are not only learning something, but also learning something they can use in the future.

The teacher learns that each assignment is designed to provide a challenge that although difficult is something that they can do and if they do it, they will earn a top grade.

The teacher learns that the foundation of teaching is to correct feedback problems and make changes to improve the structure and the process. Most importantly the teacher must create a classroom culture where the student believes and understands the teacher is on their side.

The teacher learns that it is necessary to iterate on the design of the assignments and most importantly to provide clear feedback concerning each change that is made.
Finally, the teacher learns that each class is a work in progress and that change is a constant element in the teaching process. The mindset of normalcy is a difficult challenge. A significant number of students have a "good enough" attitude. Resistance to change is the norm. Today with the power of the internet students do not hesitate to contact the teacher at any time concerning the class with a variety of requests and questions.

FINDINGS

Everything connects, in one way or another. The trick is seeing how things connect and then knowing how to use those connections. After reading over 3,000 papers some things started to connect.

There were five lessons that appeared. The first lesson was what separated the top students from the rest of the class or "how they told the story." The top students wrote more. They learned how to use examples and details to tell the story. For those students the story design provided a "threshold experience," much like the moment when I first realized I could swim, I could not only stay afloat but also I could paddle from one end of the pool to the other. They "got it," each successful business has a story that needs to be told. In each class there were a small number of students, five percent or less that seemed to have perfect word pitch. Their papers were symmetrical, balanced and flowed from one question to the next.

The second lesson was that quantity time leads to quality time. History has shown that the most successful inventors produce and realize an amazing number of ideas. The strongest correlation for the quality of ideas was the quantity of ideas. The top students in each class produced 20% more words than the average student in the class. The word difference was mostly attributed to the use of the student adding more examples both personal and business related.

The third lesson and the first job of the teacher are to "get the students to act." They need to create models that get the student thinking in multiple ways. In this experiment normalcy was the dominant thinking model. The word count and scores for approximately half of the students did not vary significantly from the first to the last paper.

The fourth lesson was the students in the top 40 percent of the class did increase their word count and personal examples in answering the student engagement questions. Some of these students shifted their perspective and wrote more about the lessons learned and what they found to be cloudy or unclear on not only the assignment but also the actions of their company.

The fifth and the most valuable lesson was the problem of satisficing. At the end of the experiment, I subjectively identified, three types of students: the bottom 10% of the class are reducers, the next 80% are satisfiers, and the top 10% are transformers.

CONCLUSION

In his 1957 book, *Models of Man,* Simon coined the term satisfice, a word that combines satisfy and suffice. By nature, people use the least effort to reach a solution that resolves the problem. They accept "good enough" and are unwilling or not capable of achieving an optimal solution. The purpose of using the Goldilocks' formula was to identify the word count that showed the "just right" or what Simon would call the satisficing point. Each week after analyzing the papers I would email the class with the average word count and would make suggestions to try to suggest students adjust the content of the papers to improve their scores. The expectation was that students with a low word count would increase their input. A second expectation was that students who had a "satisficed" word count but a below average score would change the quality of their answers. But the reality was that the majority of the class did not make any significant change. They seemed to have this idea of normal in their head and normal is the enemy of the new. That challenge for the teacher is to understand that normal is not a reality but a construct, an idea made up of a set of conceptual elements.

The important idea is normalcy is simply a mindset inside a person's head. Normal is a construct inside the head of the teacher and inside the head of the student. First, the teacher has to see and understand that he or she sees how to do something is a construct and that is can be changed. Once the teacher is free from this constraint then he or she is open to the question-based model that promotes integrated thinking as a method that could work. More research is needed but there is evidence that the use of the question-based method is transformational for a small fraction of the students who provide solutions that are clear, simple and elegant. The final challenge is to find the teacher who is willing to try a new method.

I learned from this experience that people resist change because they focus on what they have to give up, instead of what they have to gain. I also learned the value of trial and success. Now, I know what to change and to try again. It was trial and success.

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."

-Buckminster Fuller

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A Comparison of Introduction to Business Courses at Top-Ranked Schools

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ABSTRACT

First impressions play a key role in setting the expectations for a student's course of study. As such, the first business course that students take is critical in establishing high expectations for the students and for the college. While some schools may use Introduction to Accounting as its first course, other schools may develop a separate Introduction to Business (I2B) type of course. As the first business course, the I2B course can be used to achieve several objectives. However, little is written about the nature and content of the I2B course; this paper attempts to address that shortcoming by offering a descriptive look at a variety of I2B courses at a variety of top-ranked business schools.

Keywords: introduction to business, first year experience, freshmen, setting expectations

INTRODUCTION

Little has been written about the first business course that students take, yet it could be considered one of the most critical courses offered by a business school. Such a course could be used to set expectations for what the rest of the business curriculum will be like, and to get students excited about the field of business. While many schools may use an Introduction to Accounting as their first business course, several schools have opted to create an Introduction to Business (I2B) course.

The content of an Introductory Accounting course is fairly standard across schools, but the same cannot be said for the I2B course. Some schools teach what could be considered a traditional I2B course that offers a broad overview of the world of business and its functional areas. Other schools may use the course to serve multiple purposes such as professional development, improving communications skills, and teamwork. A few schools may offer what might be collectively referred to as a first year experience type of course for its business students.

The I2B course provides the opportunity to introduce students to the world of business, to get them excited about the wide range of career possibilities, and to expose the students to the wide range of resources available to them on campus. The I2B course is the student's first impression of the world of business, and of the business school, and first impressions matter.

Having an effective and enjoyable I2B course can pave the way for students to become engaged members of the business school community and allow the business school to establish what the culture of their school is like, and what is expected of its students.

Overview of I2B courses

This paper offers a brief descriptive overview of the I2B courses offered at a variety of schools. Using the most recent Bloomberg BusinessWeek rankings of the top 25 undergraduate programs (Levy, 2016) as a starting point, a search of each school's curriculum was undertaken.

Based on this analysis, it was discovered that 17 of the 25 schools offer some type of I2B course. While the set of schools that will be looked at in the following pages are likely not representative of all business schools, being aware of the variety of approaches to teaching the I2B course should be useful information for all schools. In addition, the hope is that this paper will bring to light some innovative approaches to the I2B course that are not captured by the 17 schools described below. As noted previously, not much has been written about the I2B course, but hopefully after this overview, faculty will be willing to share their school's approach to the I2B course. As more becomes written about the I2B course, faculty can then pick and choose what they see as the best ideas from a variety of approaches and create a course that is most effective for its students and their school.

The descriptions of the I2B courses given below are presented in alphabetical order by the name of the University/College. That should make it easier for the reader to look for a particular school of interest. As will be

seen, there was a varying amount of information available about these I2B courses, and a link is provided to where the information was provided.

After the course descriptions there is a table that compares the variety of approaches to the I2B course at these 17 schools on a variety of dimensions. After the table, there is a brief summary and analysis of the comparisons.

Bentley University
Bentley offers what it refers to as its First Year Seminar. The seminar is a mandatory one-credit course for all first year students that is co-taught by a faculty member along with an upper-class student. The seminar utilizes classroom discussions, informational sessions, and readings that focus on issues relevant to academic success at Bentley. Course requirements include mandatory attendance at informational sessions, participation in small group discussions and a culminating journal reflecting on one's personal experience and development during the fall semester. Each faculty member will serve as the academic advisor for the students in that class for their first year at Bentley. Students will be required to meet individually with their advisor to discuss and select their spring classes.

Boston College (Carroll School of Management)
In 2006, an interdisciplinary team of faculty gathered to discuss the Carroll School undergraduate curriculum. A freshman seminar was designed and was named Portico, symbolizing the formational and developmental aspirations of the course.

Portico offers the beginning student a unique opportunity to situate contemporary business in a context that is global and historical; learn about business through engagement with faculty and practitioners; develop a nuanced method for recognizing and responding to the ethical challenges of contemporary business; and raise questions about personal aspirations and the opportunities available in the world of work. As its faculty creators—a team blending the talents of the Carroll School of Management and the College of Arts and Sciences—described it, "the basic framework for the class is a funnel in which we move from macro to micro/personal issues." During the first half of the course, we begin with a wide and historically informed consideration of global, national, and regional issues and end with a discussion of industry, organizational, and functional issues. During the second half of the course, the 'funnel' narrows and we consider more personal issues, including ethics, leadership, and personal/professional development. The choice of readings and assignments is designed to reinforce the interconnections across the levels of the funnel. (from the online syllabus found at http://www.caseplace.org/pdfs/Syllabus%20-%20Portico%20-%20MH100.23.pdf)

The course includes a good deal of writing, team-based assignments, a four-year trajectory assignment, and a self-assessment exercise that reinforces Jesuit principles.

Cornell University (Charles H. Dyson School of Applied Economics and Management)
The Business Management and Organization course offered at the Dyson School is a foundational course, meant to familiarize students with the use of core concepts in marketing, accounting, organizational design and management, entrepreneurship and strategy, teamwork, leadership, and ethics; as well as with the majors and the business careers that may follow it. Significant writing and analytical components are part of the course, along with both individual and team based case study analysis, as well as the evaluation of a U.S. publicly traded corporation. The use of tools such as Excel for analysis is also part of the course.

Georgetown University (McDonough School of Business)
Georgetown offers its freshmen the option to take a seminar known as the First Year Seminar (FYS) Program. FYS is an exciting way for first-year students to investigate the nature of scholarship, think about important ideas in business, and achieve intellectual and personal growth. By engaging in peer discussions and developing a mentoring relationship with faculty, students explore diverse business topics and learn about government and nonprofit organizations in Washington, D.C.

The FYS Program includes a lecture series in which students meet several times during the semester to hear lectures by faculty who introduce the fields of study in business and illustrate how scholarly research can help answer important global public policy questions. FYS also has a case competition component, in which students develop a strategic solution that addresses current business challenges facing a local nonprofit organization. Faculty and advanced undergraduates coach each team, and finalists present their strategic recommendations to executives at the client organization. For the Fall 2016 semester, the non-profit organization was the 11th Street Bridge Park.

Georgetown offer a variety of FYS programs, and allows students to choose, prior to their arrival at school, which FYS program they are most interested in. Here is a listing of the seminars that were offered during the Fall, 2016 semester.

- Heroes and Villains: Character and Leadership in a Global Context
- The Ethics of Entrepreneurship
- The Real Estate Game
- Grand Strategy: Conceptual Foundations in Strategic Thought
- Competing in a Flat World
- Wall Street and Main Street: The Wealth Divide
- Marketing in a Connected World
- Patterns of Global Commerce
- The Supreme Court, Civil Liberties, and the Regulation of the Global Marketplace

Indiana University (Kelley School of Business)
The Kelley School offers a three course sequence that takes place over a student's first three years. Referred to as the Kelley Compass, this is a "talent management system" for personal and professional development, while also enriching its academic program to deepen students' facility with global business, ethics, and critical thinking.

Each of the more than 900 incoming students will be assigned a career advisor and an academic advisor who will track with the student over three years and collaborate with Compass course instructors, ensuring the greatest possible support, coaching, and counsel.

Here is a brief description of the three course sequence:

• I: The Individual (first year). Focuses on Who am I? What do I want? How am I going to get there? Through interest/skills inventories, students develop self-awareness, discover what's possible and what they want. They analyze their cultural/ethical influences, life experiences and values/priorities, and prepare skills/activities resumes.
• II: The Team (sophomores). Immerses students in teamwork, building critical-thinking skills and cross-cultural competence. Working with local and virtual teams, students learn to manage first impressions; manage conflicting ethics; lead meetings; prepare mock interviews; produce a product; and practice business etiquette.
• III: The Professional (juniors). Provides a practical approach to leadership and decision-making, focusing on setting goals, forming action plans and assessing results. Students will work on multi-dimensional team projects and examine perspectives from a variety of individuals with vested interests.

University of Michigan (Stephen M. Ross School of Business)
Students are not formally accepted into the Ross School until their sophomore year, but prior to that, students have the option of taking Introduction to Ross: Foundations in Learning Business. This course introduces students to the world of business while supporting their transition and building a collaborative learning community, providing students with a foundation to make the most of their time at the Ross School of Business and the University of Michigan. To accomplish this goal, the course blends three interrelated topics that explore: 1. What is business, what do businesses do, and what does it mean to be business literate? 2. How can you engage in building a collaborative culture at Ross, and what's the value in doing so? 3. What is needed for you to transition successfully as a Ross business student?

Once the student is officially a part of the business school, all students enroll in Businesses and Leaders: The Positive Differences. In this course, we explore the competing tensions of how business practices and leaders impact organizational performance as well as broader social outcomes across the private, public, and nonprofit sectors. We will look at social issues that arise from business operations that result in threats to public goods and market failures; how societal issues create space for business opportunities; and the leveraging of corporate resources to solve societal problems that create values for stakeholders and shareholders. In addition to studying the role of business in society, this course examines personal and professional responsibility. This will entail students examining the connections between personal values, career goals, ethical decision making, and moral courage. Also, students will

reflect upon their responsibilities and contributions to the Ross community and the business profession, and develop personal plans to guide their actions.

New York University (Leonard N. Stern School of Business)
Stern has a Cohort Leadership Program which is meant to introduce freshmen students to the world of business through an engaging innovation project that will allow them to reflect on their leadership style and build strong connections with other Stern students and the school.

To prepare NYU Stern undergraduates for a world that is changing fast and business leaders need cutting-edge innovation to remain relevant this dynamic world, Stern puts all freshmen through the flagship Cohort Leadership Program, which is focused on leadership through innovation. In this 11 week freshmen seminar, students are introduced to design thinking, a powerful entrepreneurship tool for inspiring innovative solutions through human centered observations, interviews, ideation, and execution. Students work in small teams within their cohorts to develop business solutions to a real world problem. The project this past year had students find solutions to help college students make healthier food choices.

Northeastern University (D'Amore-McKim School of Business)
There is a two-course sequence for freshmen who enroll at D'Amore-McKim. The first course is Experiential Entrepreneurship, which blends theoretical principles with real-life application and introduces the fundamentals of launching, growing, and managing a business venture in today's dynamic and increasingly global environment. The course examines concepts within multiple academic disciplines and from multiple perspectives—including marketing, technology, finance, accounting, information systems, people, and culture—and then applies them to new ventures within varied types of organizations. The course offers students an opportunity to develop an entrepreneurial skill set and mind-set through the development of the critical thinking, innovative decision making, problem solving, and team building needed for any business, large or small.

The second course is Personal Skill Development for Business which offers first-year students an opportunity to achieve a better understanding of themselves as students and as future professionals. The course explores self-analysis, leadership traits and styles, diversity and cultural awareness, professionalism, emotional intelligence, and ethics, and encourages students to draw connections among classroom education, extracurricular activities, and practical experiences and to identify how each component fits into the pursuit of their individual goals.

Ohio State University (Fisher College of Business)
Business Skills and Environment is the introductory course required of all undergraduate students in The Fisher College of Business. The course format is a weekly lecture, a weekly recitation section, and a weekly workshop. This course introduces students to the role of business in the lives of individuals, consumers, employees, and citizens. It also introduces the concept of ethical leadership and emphasizes both oral and written communication skills for the business environment. Students will be required to do several written assignments as well as present both as individuals and in teams. Students are also introduced to ethical approaches to problem solving.

Penn State University (Smeal College of Business)
Smeal College offers a first-year seminar that meets in 50-minute class periods once per week. The diverse faculty consists of experienced business teachers, corporate professionals, and higher education practitioners. The seminar is designed to be an interactive learning experience by engaging the students with each other and the instructor. Accordingly, the course requires cooperation, participation, and interaction among all class participants. The topics presented and the skills learned are applicable to college as well as the corporate environment. The course uses textbook reading, class discussions, in-class presentations, and experiential exercises throughout the semester. In addition to academic business content, one of the main components of the seminar is a review of majors in the College and the careers those majors traditionally lead to after graduation. Students work in teams to conduct research and deliver a presentation to their classmates on a specific area of business. Other seminar topics include: Time Management & Goal Setting, University Resources, Study Skills, Teamwork, Leadership, Ethics, Community Service and Corporate Citizenship, Diversity and Workplace Diversity, and a Business Simulation Case Study.

Syracuse University (Martin J. Whitman School of Management)
The Whitman School offers a required freshmen year course known as Perspectives of Business and Management. The course catalog description notes that the objectives of the course are: understanding of role and responsibility of management in society; fundamental knowledge of nature and integration of functional disciplines in business; skills

essential to effective management; and development of base for academic/career mission and achievement. In addition to the academic content offered by this course, all Whitman students are part of the college's Impress program that quantifies extracurricular activities, promotes healthy competition, and prepares Whitman students to be the best business professionals they can be. Each incoming student is assigned to one of four "houses", and can earn points for themselves and their house by attending extracurricular events scheduled throughout the year such as leadership lectures and workshops, guest speakers, and professional and personal development sessions.

University of Pennsylvania (The Wharton School)
Beginning in the Fall of 2017, the Wharton School will require all freshmen to take Wharton 101: First Year Gateway/Business Pathways. Wharton 101 is the gateway course of a four-year Leadership Journey and features professors and alumni in conversations about critical problems, research, and leadership in a series of sessions spanning the School's curricular areas. The course objectives are to:

- Introduce students to the wide range of curricular opportunities available at Wharton
- Make students more aware of their strengths and leadership potential
- Orient students to the Wharton experience and empower them to become engaged members of the scholarly and co-curricular community

This course is graded on a pass/fail basis. The other courses in this Leadership Journey program are: Oral and Written Communications, Teamwork and Personal Dynamics, and Senior Capstone Course or Project. The primary goals of the revised curriculum are to offer students greater flexibility in pursuing academic interests outside of the Wharton curriculum, add more dimensions to the Wharton core, and better familiarize students with the many different ways that technology and innovation can be applied to Wharton's concentrations.

University of Texas (McCombs School of Business)
Professional Development & Career Planning is a required course that all undergraduate business students take prior to graduation. This course presents the foundations for executing a successful job search and focuses on career management as a lifelong process. The course assists students with planning, implementing, and evaluating their careers. After completing this course, students should have: created a resume, identified and applied job search related communication tools, gained an understanding of the nature and value of networking and marketing themselves, and utilized interview techniques to complete a mock interview.

Villanova University
First semester freshmen at the Villanova School of Business are enrolled in Business Dynamics (BD). The course emphasizes the overarching purpose of business within society and the manner in which business vision is actualized. Business Dynamics provides context for students' business learning experience and integrates global, political, ethical, and technological dimensions of business. The course serves as the first step in preparing students to become creative and innovative problem solvers, and seeks to develop analytical business writing and presentation skills.

In addition to covering the basic concepts included in a traditional Introduction to Business course, Business Dynamics also includes a Professional Development (PD) component that requires students to attend three PD events during the semester, and write a reflection paper on each event. The papers must be written in certain formats, including a business email, a memo, and a blog. The course also includes individual and team presentations.

Each year the BD faculty also choose a book that will be integrated into the course to serve as an example of many of the concepts discussed in the course. Past books have included Do the KIND Thing, Start Something That Matters, and Conscious Capitalism. Known as the Read to Lead program, it is sponsored by EY, the global professional services firm.

Wake Forest University
In "Why Business?", students explore the question of what the role of business is in a humane and just society. In this course, students look at both classic and contemporary discussions of the nature, benefits, and limits of a market economy, and consider various objections, including moral objections, to commercial society. The course also looks at several functional areas of business and investigate the extent to which they can contribute to a humane and just society.

Washington University in St. Louis (Olin Business School)
Freshmen at the Olin School take two courses concurrently to introduce them to the world of business. The first course is Individual in a Managerial Environment is an introduction to the foundations of business. The course covers four major themes: (1) how markets work; (2) motivating and managing people; (3) business strategy and firm performance; (4) ethics and corporate social responsibility.

The second course is Foundations of Business which provides first semester business students with an introduction to each of the functional areas of business as well as the entrepreneurial function. As they work to design their own enterprise, students will build skills in teamwork, communication, critical thinking, and an understanding of the complex interplay of business functions. Each group of students creates a (hypothetical) consumer product to be sold in a retail establishment. Each week, after members of Olin's senior faculty teach the first year students about a discipline within business, the students apply their knowledge to determine how the discipline impacts their product.

William and Mary (Raymond A. Mason School of Business)

Business Perspectives and Applications is designed to complement the core courses in the undergraduate program by integrating business disciplines, ethical considerations, and business communications. The course includes business simulations, team interaction, and presentation skills.

SUMMARY AND ANALYSIS

The table below offers a comparison of these I2B courses along a variety of dimensions. The first column offers just some basic course logistics information: what year the course of offered, how many credit hours the course is worth, whether the course is required, and if it is taken pass/fail. The next column notes whether professional communications is a key part of the course, including specific written and oral assignments. If such information could not be clearly determined, the column was marked NA. The Professional Development (PD) column works the same as the Communications column; if it appeared that PD (resume/interviewing/etiquette) was a significant part of the course, the response was yes; otherwise it was NA. The Survey of Business Disciplines column is used to indicate if the course covers business content such as management, marketing, finance, and accounting. For the Course Project column, if it appeared as if projects were a key part of the course, then the project was appropriately classified. The Special Notes column is designed to highlight one or more of the key distinguishing features of the course at that institution.

The table reveals that there is no standard approach to the I2B course. From a logistics perspective, the most common approach is to have a required I2B course during freshmen year, but that is not always the case, as evidenced by Ohio State and William & Mary. Some schools focus more on Professional Communications and Development, others emphasize Business Disciplines, but most seem to cover all three categories. Teamwork seems to be another common theme. Some schools offer its students the opportunity to work on real-world business projects, others use simulations, case studies, and other hands-on approaches as a way to bring the material to life.

Table 1: Comparison of Introduction to Business Courses at 17 Top-Ranked Schools

School	Yearr Offered/ Credit hours/ Required	Professional Communica-tions	Professional Development	Survey of Business Disciplines	Course Projects (team vs. individual)	Special Notes
Bentley	Fr/1/yes	NA	Yes	No	Individual	Focus is on how to achieve academic success; personal journal
Boston College	Fr/3/yes	Yes	Yes	Yes	Both	Self-assessment exercise; four-year trajectory assignment
Cornell	Fr/4/yes	Yes	Yes	Yes	Both	comprehensive analysis of a US publicly traded corporation
Georgetown	Fr/3/no	NA	NA	Yes	Team case competition	Multiple versions of seminar based on faculty preference
Indiana	Fr/1.5/yes	NA	Yes	Yes	individual	Each student creates his/her own team, You, Inc.; part of 3-year Kelly Compass program
Michigan	Fr/1/yes* So/3/yes	NA NA	Yes Yes	Yes Yes	NA NA	*Required for most students; first line is for Intro to Ross course; second line is for Businesses and Leaders course
NYU	Fr/0/yes	Yes	Yes	Yes	Team	Small teams work on real-world problems using design thinking
Northeastern	Fr/4/yes* Fr/0/yes	Yes NA	No Yes	Yes NA	Team	Two course sequence; first course is Experiential Entrepreneurship; second course is Personal Skill Development for Business; *required for most students
Ohio State	So/3/yes	Yes	Yes	Yes	Team	Focus on ethical decision making and communications skills
Penn State	Fr/1/yes	Yes	Yes	Yes	Both	Strong focus on choosing a major
Syracuse	Fr/3/yes	Yes	NA	Yes	Team	Part of College's IMPRESS program
Penn	Fr/.5/yes pass/fail	NA	Yes	Yes	Individual	Part of a four year integrated Leadership Journey
Texas	Fr/1/yes	Yes	Yes	No	Individual	Focus on career planning and development
Villanova	Fr/3/yes	Yes	Yes	Yes	Both	Integrated professional development and communications component
Wake Forest	Fr/3/yes	NA	NA	Yes	NA	Focuses on the role of business in a humane and just society
Washington U.	Fr/3/yes Fr/2/yes	NA Yes	NA Yes	Yes NA	NA Team	First line is for Individual in a Managerial Environment; second line is for Foundations of Business
William & Mary	Jr/1/yes pass/fail	Yes	Yes	Yes	Both	Part of an integrated junior year core; integrates business disciplines

CONCLUSION

The goal of this paper is to provide a starting point for creating a repository of information about the nature and content of the first academic business course/experience that business schools require of its students by looking at the offerings of several of the Bloomberg Businessweek Top 25 programs.

As such, the hope is that other schools which have created innovative introduction to business courses will share their ideas so that schools looking to implement or innovate their I2B course will have a valuable set of resources to draw upon. The next step for further exploration would be in-depth looks at some of the more innovative and successful implementations of the I2B course, whether it comes from this list of schools, or from other colleges.

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Turnaround Strategy: Overview of the Business and Marketing Challenges Facing the Golf Industry and Initiatives to Reinvigorate the Game

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ABSTRACT

This paper presents an overview of challenges facing the U.S. golf industry, the subsequent impact, and the implementation of programs to address the problems. The challenges addressed in the U.S. and beyond include the overbuilding of golf courses, low participation in the game, and a decreased demand for golf rounds. The impact of these challenges has resulted in discounting golf rounds, along with closures, conversions, or selling off of golf course properties. To remedy these challenges, several managerial and marketing initiatives have been implemented, including the provision of women-friendly facilities, tee positioning systems appropriate for recreational golfers, the Get Golf Ready program for beginners, and a dramatically increased marketing campaign by major golf entities. This situation analysis of the golf industry can be used to illustrate various challenges and possible responses to the decline in participation in golf, which include changing consumer preferences; managing a business in a market with declining primary demand; managing the tension between innovation and tradition in the golf industry, and others. These business challenges can be extended beyond golf to other service industries facing a changing environment.

Keywords: Golf, Management, Marketing, USGA, PGA, LPGA, Course

INTRODUCTION

The management of many golf courses in the United States has fought for survival in the last few years due to the problem of supply and demand. The supply of golf courses has grown to be excessive, while the demand for participation in the game has gradually decreased, leaving course managers to compete for players. The purpose of this paper is to briefly overview the problem of supply and demand, examine the subsequent consequences of golf rounds being discounted and courses being closed, converted, or purchased by management companies, and review some of golf management's efforts to attract new golfers and to retain the regular players by implementing structural and marketing initiatives. Although this paper primarily focuses on the state of the golf industry in the United States, several other world golf markets share similarities, particularly Europe.

Golf industry business professionals are facing multifaceted challenges. This situation analysis of the golf industry can be used to illustrate various challenges and possible responses to the decline in participation in golf. The golf industry is faced with aging and declining numbers of people interested in playing a traditional round of golf. A consumer who seeks a more casual, less challenging, less expensive alternative is emerging. Should golf's loyal players try to shape younger people into golfers, or change the game to accommodate their needs? How can one preserve the cherished history of golf at a time when "legacy" is a word that connotes obsolete and behind the times?

The challenges facing golf can be used to illustrate a variety of business challenges:

* Adapting a service to changing customer, while not alienating traditional consumers
* Finding opportunities for growth for a service with declining primary demand
* Running a high-fixed-cost business with declining demand and revenues
* Choosing whether to adopt or ignore innovations in service design
* Facing the challenges of marketing a service, which has unique characteristics when compared to physical products (intangibility, perishability, inseparability, variability).

EARLY AMERICAN GOLF COURSES

St. Andrew's Golf Club built in 1888 in Yonkers, New York, is generally recognized as the first modern [private] American golf course. However, according to Kirsch (2009), Vermont's Dorset Field Club and Pennsylvania's

Foxburg Club "have challenged [St. Andrew's] claim to be the oldest golf club in continuous existence in the United States" (p. 4). By 1895, 50 clubs had developed courses throughout cities and suburbs as the fascination with golf surged among the elite and upper middle classes in the United States. According to a journalist for the *Montclair Times* of New Jersey on November 24, 1894, "The victims of acute golf mania are to be avoided by all who are not in touch with the passing vogue, for they can talk of nothing but golf, dream of it, radiate it in fact, in spite of the mournful fact than an expert has said that it takes three years to become proficient in the game" (Kirsch, p. 6). Additional prestigious golf clubs that laid out courses during this period included Newport Golf Club (presently known as the Country Club), Chicago Golf Club, The Country Club (located in Brookline, Massachusetts), and Shinnecock Hills Golf Club.

U.S. GOLF COURSE BUILDING BOOMS

As the private golf clubs continued to form, public golf courses soon followed, beginning in 1890 with the 9-hole Dutcher Golf Course in Pawling, New York, and in 1895 with the 18-hole Van Cortlandt Park Golf Course, located in the Bronx. As the popularity of golf grew, both private and public courses were constructed throughout the Roaring Twenties—a time referenced as the First Building Boom of golf courses (Beditz, & Kass, 2010). By 1931, there were 700 daily fee courses (i.e. public access courses), 543 municipal courses, and 4,448 private golf clubs in the United States, giving a total of 5,691 courses. As seen in Table 1, just prior to World War II, the number of daily fee courses continued to increase, with the exception of private courses (National Golf Foundation, 2016).

During the years of World War II, people lost interest in golf and became primarily concerned with physical and financial survival, leaving golf construction relatively stagnant. Again, in Table 1, it was not until the 1960s and 1970s that an interest in course development re-emerged in a Second Building Boom (Beditz, & Kass, 2010; National Golf Foundation, 2016). By 1979, the total number of courses had more than doubled to 11,966 (National Golf Foundation, 2016).

In the late 1990s, the National Golf Foundation (NGF) used projected economic forecasts and future population demographics to announce a strategic plan for building substantially more golf courses. The plan came to be referenced as building "a course a day." The NGF believed the plan would assist in providing a sufficient number of courses with a potentially rising demand of golfers, including a large population of Baby Boomers advancing toward retirement (Vasilak, 2010, p. 1).

Having convenient and easy financing available in the 1990s and seeing courses as enhancing real estate and high-end housing pricing, investors and real estate developers quickly responded to the NGF's strategic plan, making way for the Third Building Boom and an oversupply of golf courses (Beditz, & Kass, 2010). Table 1 shows the construction of courses had significantly grown to 15,195 by 1999. Construction continued until mid-2000s, resulting in a total of 16,057 courses by 2004 (National Golf Foundation, 2016). The building of golf courses only began to slow down in the early 2000s. By 2010, the number of courses had grown little since 2003, with 9,233 daily fee courses, 2,395 municipals, 4,262 private courses, along with a total of 15,890 courses. By the beginning of 2015, the total number of courses had fallen to 15,372 (National Golf Foundation, 2016).

Indeed, in 2015, 34,011 golf courses are in the world, and the U.S. has 45 percent of them (Royal and Ancient, 2015, p. 4). As critics looked to lay blame for the industry's oversupply of golf courses on the National Golf Foundation's decision to build a "course a day," Joe Beditz, Ph. D., president of the National Golf Foundation, defended the Foundation and claimed the blame lay with developers. In an interview with *Sports Illustrated*, he stated:

> What no one remembers is that . . . we issued a second report saying our assumption of 3 to 4 percent growth wasn't happening…. Baby boomers were working more, not less, than their parents. Supply was outpacing demand by a considerable amount. We said, 'Stop!' But the developers went ahead and built another 1,500 courses anyway [across the Sunbelt from the Carolinas to Arizona]. They saw gold in them thar fairways. Instead of a golf boom we had a construction boom, and everyone built in the same markets at the same price points. The only way to win was to hurt your competitor. People built irrationally, and now they're blaming us (Swift, 2004, p. 78).

Regardless of who or what forces were to blame, the reality of an oversupply of golf courses became a major challenge to the golf industry.

GOLF PARTICIPATION AND GOLF ROUNDS

In the early years of the building boom, management of the golf industry was pleased with the growing number of participants, totaling approximately 27 million. From 1991 through 1999, there was some uneasiness among the ranks of management as the number of golfers moderately fluctuated between 19 million to 26 million players (National Golf Foundation, 2012b).

Nonetheless, by 2005, participation had climbed to 30 million golfers, and all looked well for golf managers. Then, in the next few years as the number began to decrease, management realized there was a need for greater numbers of golfers to play the extensive number of golf courses. By 2010, the number of participants had significantly dropped to 26.1 million players (National Golf Foundation, 2012b). By 2011, there was a historic drop resulting in 25.7 million golfers playing the game (National Golf Foundation, 2012a). The decline in golf participation had become another major concern for golf management.

Golf participation numbers were mimicked by the number of rounds of golf; as seen in Table 2, the lowest number of rounds was 418.3 million rounds in 1994, with the highest number of rounds at 518.4 million being reached at golf's peak in 2000, with a steady decline after that (National Golf Foundation, 2015b).

IMPACT OF OVERBUILDING AND DECREASED PARTICIPATION AND ROUNDS

The imbalance between the oversupply of golf courses and the inadequate demand for participation and number of rounds forced management in the golf industry to make changes for the survival of golf courses. In addition, research found that most golf course development in recent years was tied to real estate development, and that course difficulty was far too great in these courses, thus discouraging golfers (Hueber, 2012).

Closures, Conversions, Third-Party Management Take-Overs

The mix of an oversaturated market of golf courses, low golf participation, decreased number of rounds, along with discounting golf rounds, placed several golf facilities in financial difficulties. Although "many of the most established, old-money clubs across the country, particularly those including Augusta National, Shinnecock Hills Golf Club outside New York City, and Riviera Country Club in Los Angeles remained impervious to the current downdraft" (Foust, 2009, para 3), there remained 10 to 15 percent of clubs that were highly likely to experience financial troubles (Beditz & Kass, 2008).

The economic outlook was most bleak for daily fee courses. According to the National Golf Foundation, 1,500 to 2,000 daily fee and public courses were facing financial threats to their livelihood. Some of those in the gravest danger were the "9-holers…courses at the lower price points, alternative facilities (par-3 and executive) and those in less populated area…[and] certain very high-end/highly debt-leveraged facilities" (Beditz & Kass, 2010, p. 3).

When private clubs or public courses could not recover on their own, they often resorted to closures, conversions, or third party management takeovers. The year 2011 witnessed many distressed golf properties undergoing these legal processes. According to the National Golf Foundation, closures of domestic golf courses included 95.5 daily fee courses, 10 municipal courses, and 17.5 private courses. Conversions consisted of 83 private facilities converted to public ones and 25 public facilities converted to private clubs (National Golf Foundation, 2011, p. 13). Furthermore, takeovers by some of the largest third-party management companies in 2011 acquired and managed 1,653 18-hole equivalent golf courses (Crittenden, 2011). Of the top 25 largest management companies, the top ten are found in Table 3; as one can see, super companies with the capital enough to do so took over many small courses in the years between 2011 and 2016, especially since the smaller companies failed.

European Similarities

The golf bust seems to be mostly a U.S. and European problem. KPMG's "Golf Participation in Europe 2015" report states that in 2014, Europe as a whole lost 77,000 golfers and that "the only countries where it might be considered that golf is well established and which registered significant increases in golfers in 2014 were Belgium and Switzerland (+2.8% and +1.4%, respectively)" (KPMG, 2015, p. 4). Numbers of golfers in Europe leveled off after 2010 and lost around 2-3% per year since then (KPMG, 2015, p. 6). Therefore, golf is spreading to the East in Europe—to places such as Belarus and the Czech Republic; there are 8 courses in Latvia and 6 in the Ukraine; there are even two courses in Greenland (R & A, 2015, p. 12). Of course, Germany and the U.K. dominate with over 50% of European courses (R & A, 2015, p. 12).

MEETING CHALLENGES WITH MARKETING INITIATIVES

In a large reversal of fortune, in 2016, *Golf Digest* reported that in the U. S., the "number of rounds played is through the roof," with March 2016 alone at a 13.2% increase (Beall, 2016), and that the number of rounds have increased for the first time since 2012 (Kiernan, 2016). Perhaps this uptick in play has to do with the aggressive marketing and rebranding techniques of golf entities and the many initiatives to bring in new players in recent years since the decline in golf was confirmed.

LPGA Tour

The LPGA (Ladies Professional Golf Association) has been especially concerned with increasing awareness of the LPGA tour, which would hopefully bleed into more numbers of fans, and ultimately new golfers. The LPGA instigated a large social media campaign in the last few years. Tina Barnes-Budd, Senior Director of Social Media Marketing and Communication with the LPGA, stated that the tour wanted to "humanize" the brand, and that people identify with people instead of logos (Bae, 2015, p. 150).

Even so, a new logo for the LPGA tour was developed in 2007, which seemed to show a sexier, more athletic alternative (Bae, 2015). The tour instigated taglines such as "These Girls Rock" and the current "See Why it's Different out Here" campaign. In 2016, several new ad spots were debuted with marketing campaigns entitled "Mentors" and "Raising the Bar 2.0." The ads may be seen at http://www.lpga.com/news/2016-lpga-debuts-new-ad-campaign (LPGA, 2016). This is year six of more aggressive ad campaigns, which started back in 2010. "A total of 18 different players are featured in the spots that continue the popular "See Why it's Different out Here" tagline" (LPGA, 2016, para 2). Also, social media platforms such as Google+, Pinterest, Instagram, and Snapchat were ramped up, along with old favorites Facebook and YouTube.

Indeed, the LPGA encourages players to be engaged in social media, as fans want to hear from them. "Twitter Takeovers" by players during Golf Channel broadcasts proved popular (Bae, 2015). Every week on tour, players are given the correct handles and hashtags from that week's tournament sponsors to use in their personal posts, and players' Twitter handles are displayed on caddy bibs (Bae, 2015, pp. 151-152). Golf lessons are advertised on the LPGA website. Also, the international field of the LPGA seems to be a good connection to diversity, as the more segmented male PGA tour (European Tour and PGA tours) usually only gets together for the four major tournaments and the Ryder Cup. Much investment in the LPGA tour is made via foreign countries ($29.1 million of a $61.6 million season purse in 2015) (Bae, 2015, p. 153).

PGA Tour

Since Tiger Woods sank from the PGA (Professional Golf Association) tour, helping both dabblers and potential players know the game's new top players is helping to market golf. "The top spot in the world rankings has changed hands nine times in the past eight months alone" ("How Golf," 2016, para 9). Millennials (18-34 year-olds) identify with the top hot players of Jordan Speith, Rickie Fowler, Jason Day, and Rory McIlroy, who are all well under 30 years old. Millennials are larger fans of golf, seeing it as cool, than other age ranges. It wasn't always this way, as several tell-tale symbols said that youngsters were not interested in golf, such as low t.v. ratings and little golf merchandise sold (Heine, 2015).

However, marketing efforts seem to have helped. According to the "#Golf and the Millennial Generation," published by the National Golf Foundation (2015a), around 6 million of the generation play nearly 90 million rounds and spend $5 billion per year. Ideas that courses have marketed to millennials include "golf bikes" to get to their shots at Palmetto Dunes, to SNAG (Starting New at Golf) courses in Loveland, Colorado. Southern California Golf Association is reducing rates for young players (National Golf Foundation, 2015a, 69-70), like many courses in the country.

Several big events are currently being marketed in 2016, such as all four majors, the Olympics, and the Ryder Cup. Several stars in other sports are seeing that golf gets in the limelight by Tweeting about their playing, such as Steph Curry (basketball star), One Republic (music group), and Kelly Rorhback (*Sports Illustrated* swimsuit model and collegiate golfer at Georgetown) (Heitner, 2015). The PGA tour is "touting outside the ropes "experiences" at its 16 owned and operated golf tournaments with social media-friendly, targeted marketing including "hash-taglines" such as #Morethangolf at the recent Northern Trust Open in Los Angeles" (Gray, 2015, para 4).

For the Northern Trust Open, the tour used "food trucks, a Green Room sponsored by SoCal hip clothing brand johnnie-O, and a concert by alt-rockers O.A.R. after Saturday's round concluded" (Gray, 2015, para 14). In fact, 2500 fans came to see O.A.R., and just happened to be doing it on a driving range. The tour is doing more and more of these events targeting millennials. Also, the PGA tour launched the "These Guys are Good" spots on t.v., YouTube, Spotify, and all over the Internet. These spots feature many young stars in the game such as Dustin Johnson, Speith, and many more. The Golf Channel's funnyman David Feherty seems to be having an uptick of young stars on his show doing interviews. Baar (2015), writing for *Marketing Daily*, noticed that the "new round of advertising for the tour showed off the work and dedication the professionals competing for the FedExCup have for their sport." Baar also commented on the new commercials in the PGA tour's "This Guy" campaign (2015, para 2).

USGA

The USGA (United States Golf Association) has joined in with the PGA and LPGA tours to market golf via several USGA spots entitled "A Lot to Love about Golf" (video can be seen here: https://www.ispot.tv/ad/7h_j/usga-a-lot-to-love-about-golf) and shows people from all walks of life practicing wherever they are. USGA commercials recently surged in the effort to market the game as a whole. In early 2015, it was announced that viewers of such channels with 21st Century Fox, including Fox, FX, and National Geographic Channel would be seeing many golf ads. "The supply is a result of the deal the USGA struck with Fox Sports in 2013 that includes broadcast rights to the U.S. Open…" (Schultz, 2015, para 2).

MEETING CHALLENGES WITH MANAGERIAL INITIATIVES

This paper also reviews a few managerial initiatives designed to counter some of the problems facing the golf facilities, and thereby promote recruitment and retention of golfers. These initiatives include notations of needed provisions on golf courses from women's points of view, implementation of two types of tee positioning systems appropriate for recreational golfers, and the adoption of the Get Golf Ready program by facilities across the country. Golf associations and courses have also courted new golfers with grow-the-game initiatives, and new sources of revenue with non-traditional means such as shorter rounds, enhanced driving ranges, and new games such as FootGolf.

Golf Round Discounting

Beditz, the NGF President, foreshadowed the advent of discounting in his *Sports Illustrated* interview noted earlier when he said, "The only way to win [survive in golf course management] was to hurt your competitor" (Swift, 2004, p. 78). One form of the "hurt your competitor" was known by many as discounting golf rounds.

For example, a manager of a typical municipal golf course located somewhere in the Sunbelt may record 420 rounds of golf in the month of April accompanied by a green fee of $25 per round. The resulting revenue would be $10,500. However, if golfers purchased those rounds from a third party at a 15 percent discount, the revenue in this case for the municipal golf course would drop to $8,925--a loss of $1,575, yet expenses and taxes would either remain constant or perhaps increase. Although this is a simple example, it demonstrates the negative impact that "discounting" golf rounds may have on golf facilities.

"Discounting" is a practice in which third parties purchase rounds of golf from clubs at the lowest possible rates and then, with a substantial mark-up, sell them for sizable profits in forms of "discounted coupons" to interested buyers. Although club facilities understand they are selling rounds at a rock-bottom price, they tend to justify their actions in that it is better to earn at least some marginal revenue from third party discounters than to receive only a bare minimum from clients/members who may or may not choose to play one or more rounds of golf.

However, the general opinion from golf course managers and executives in the field regarding discounting has been that it was a negative impact on golf. According to Palmer, a golf course manager for more than 20 years, "Discounting rates and selling to third parties is the death of public golf" (Hammond, 2012, para 9). Jeff Schwister, Executive Director of the Golf Course Owners of Wisconsin, also acknowledged "discounting" as a serious problem for golf facilities. To avoid the danger of "discounting," Schwister encouraged clubs to manage their own sales of golf rounds and tee times by building databases of their customers and other potential golfers and promoting their golf courses and tee-times via emails and websites. In addition, he urged clubs to set up partnerships with local hotels, bed-breakfast accommodations, or resorts, and promote their courses in a form of attractive golf packages (Schwister, 2011).

Women-Friendly Golf Facilities

With women only comprising 21 to 22 percent of the golf population, golf management has realized the importance of promoting and retaining their participation by effectively responding to their needs in a golfing environment. Several of these needs were addressed in a study by the Sports & Leisure Research Group (2011).
The first area of needs noted by women was "eliminating physical and emotion stressors" (p. 14).

Satisfaction of this need included the availability of drinking water and bathrooms throughout the course, provision of nutritious food in the pro shop, clear signage on the course, and GPS systems installed in golf carts. A second area listed was the need to "reduce the frustration with the game." Since 50 percent of women were unable to reach the green in regulation, they requested the advancement of women's tee boxes to complement their golf swing distance. They also preferred routine maintenance to keep the course clean and aesthetically pleasing to the eye. The third area listed was the need for having various expense options of play available. Women requested a platform in which they could choose to pay for 9-holes rather than 18 or to pay for a specific number of holes less than nine (Sports & Leisure Group, 2011). In summary, the study of these areas of needs strongly recommended golf management to consider incorporating these concerns in golf facilities throughout the United States.

Another initiative designed to attract women golfers is accredited to Arthur Little and his wife Jann Leeming who set up a daycare center at their renovated facility at Province Lake Golf Course on the Maine-New Hampshire border. The service allowed mothers to play golf with a peace of mind while their child(ren) were in the care of a professional. The program resulted in an increased number of women golfers from 15 percent to 35 percent (Little, 2011).

Tee Positioning Initiative--Playing it Forward

When Leeming and Little bought Province Lake Golf Club out of bankruptcy, they knew one of the keys to attracting and retaining customers was to offer golf as a fun experience. They advised, "If golfers don't have fun and are uncomfortable at your course, they will not be customers for long" (Leeming & Little, 2011, p. 16).

To attract and retain golfers and set up the course to "survive economically," Leeming and Little designed a tee positioning system named 'Playing It Forward.' The system was designed to determine a golfer's tee position by his or her swing speed. The swing speed corresponded to an average yardage course length recommended for the player. The system, as seen in Table 4, indicates suggested tee colors, the average drive in yardage, the calculated course yardage, and handicap. The golfer's swing speed was also associated with a specific colored marker designated by the club facility. The system required a player to play from his or her assigned colored marker for the complete round (Little & Leeming, 2010).

For managers of golf facilities who incorporated the "Playing It Forward" initiative, Little and Leeming (2010) reported that they found it encouraged seniors, women, and juniors, any minority groups, as well as all other golfers to play greens in regulation, have a few birdies, and experience faster play (p. 18).

Impressed by the "Playing It Forward" tee positioning philosophy, several notable golf course owners, including Milan Kapel of Berkshire Hills in Chesterland, Ohio, and Mike Keiser of Oregon's Coastal Bandon Dunes Resort, implemented the system on their courses. It is interesting to note that Bandon Dunes is ranked as the Number One Golf Resort in North America by *Golf Digest* in 2011 (Whitten & Finch 2011), a ranking, which may be due, in part, to the tee positioning system introduced by Little and Leeming.

Tee Positioning Initiative--Tee it Forward

Golf facilities also might consider implementing a similar tee position system known as 'Tee It Forward' to encourage golfers and family members to enjoy golf more frequently and play the game in a shorter period of time. The system is based on the contributions of Barney Adams, founder of Adams Golf (Auclair, 2011), and is supported by Little and his wife Leeming, who pledged to help advance the program. "Tee It Forward" was introduced in 2011 by PGA of America and the United States Golf Association as a national initiative to encourage golfers to play the course at a length that is aligned with their average driving distance (ESPN, 2011). For facilities that adopt this tee positioning system, they should see their golfers playing from tees that give them the benefit of using shorter clubs in their approach shots and hitting the green in regulation.

Online feedback from approximately 600 individuals regarding their experience in the Tee It Forward program was as follows:

- 85 percent had more fun
- 56 percent played faster
- 56 percent were likely to play more often
- 83 percent hit more lofted clubs into greens
- 93 percent were likely to *TEE IT FORWARD* again (Play Golf America, 2012).

Get Golf Ready

With almost 27 million individuals expressing an interest in playing the game, golf management decided to tap into this pool of latent golfers by implementing the Get Golf Ready (GGR) program, a 2008 Play Golf America initiative. It is a five-day program costing $99 and consisting of a 60-90 minute daily group lesson on golf fundamentals, aimed at adult golfers. As of 2011, there were 1,888 GGR certified facilities with an average of 40.5 students per facility, which is an increase of 8.6 percent over 2010 (Get Golf Ready, 2011).

Grow the Game

Although Get Golf Ready is for adult beginners, there are several programs focused on introducing golf to youth. One is the PGA Junior League Golf, a team format for boys and girls 13 and under, which has increased 233 percent since 2013 (Heitner, 2016). Also for girls there is the LPGA-USGA Girls Golf. "The First Tee" offers after-school and in-school programs in 8,000 elementary schools and 700 youth centers (Heitner, 2016) and is supported by golf's major organizations, including the LPGA, Masters Tournament, PGA of America, PGA TOUR and USGA ("The First Tee," 2016).

Another youth program is the Drive, Chip and Putt Championship, "a golf development initiative founded in 2013 by the Masters Tournament, United States Golf Association and The PGA of America" (Hall, 2016, para 2). These initiatives are all focused on increasing primary demand for traditional golf by introducing golf to young people. Although the junior programs are successful in the 5 to 12 age range, there is a window of time in which 12 to 15 year olds are less active in golf, although they may return to the course at high school age (Snodgrass, 2016).

Play Fewer Holes

The challenges of marketing golf to millenials goes beyond using advertising to generate awareness and interest in the game. Golf is, in some ways, incompatible with the lifestyle of millenials, and is faced with barriers to increased participation. An oft-noted issue is the time commitment to play a round of golf. An 18-hole round of golf, including travel and warm-up, can take 5 hours or more. Golf is competing for people's time spent with non-golfers, including friends, life partners, children, and other family. Prime golfing time is on the weekends, which is also prime family time. According to a teaching golf pro, among golfers the 30 – 45 age range is missing from the course due to activities with children (Snodgrass, 2016); he offers 9-hole packages for the time-pressed golfer.

Arlington Lakes Golf Club (Chicago area) reconfigured its course to allow for 3-hole, 6-hole and 12-hole rounds, which take about 30, 60, and 90 minutes to play. According to Greenstein (2016, para 18) "shorter, easier courses lead to faster rounds, lower scores and happier customers." Arlington Lakes offers green fees that attract casual golfers, such as $14 for 6 holes (cart not included). Nationally, the USGA promoted 9-hole play with its PLAY9 initiative. According to the USGA (2016), "the USGA's PLAY9 program has been actively educating and rallying golfers around the concept of the nine-hole round as a simple yet effective solution to address the challenge of fitting golf into busy days" (para 2). The USGA claims its PLAY9 Days have increased nine-hole rounds, as measured by scores posted to its handicap network.

Non-Traditional Golf

According to Tim Finchem, PGA tour Commissioner, people are also experiencing golf outside of traditional golf courses with more than 18 million participants, 7 million of which are non-golfers, taking part at driving ranges, Topgolf facilities and simulators (Heitner, 2016). According to Topgolf (2016), "Topgolf is the premier golf entertainment complex where the competition of sport meets your favorite local hangout. Players hit golf balls containing computer microchips that track each shot's accuracy and distance while also awarding points for hitting targets on the outfield" (para 1). Topgolf is essentially a driving range that offers competition and opportunities to socialize to everyone, an attractive combination for millenials.

Some golf courses are providing golf-like experiences with non-regulation equipment. One relatively simple variation on traditional golf is an entry-level version in which the holes are 15 inches wide, about four times the width of a standard hole (Pennington, 2014). The wider hole helps junior, beginners, and older golfers play better golf and enjoy it more.

Another variation on golf includes a wider hole and a different ball – a soccer ball. Footgolf has been a financial success at some traditional golf courses, leading the National Golf Course Owners Association to recognize the American Footgolf League (AFGL) as the governing body for the hybrid soccer/golf sport of Footgolf in U.S. ("American Footgolf," 2014). The AFGL lists over 490 sanctioned Footgolf courses.

Disc golf is played with a flying disc and a basket; no clubs, balls, or holes. According to SportsPlanningGuide, disc golf courses popping up all over the world and with an estimated 8-12 million people having played the sport at least once (Morrill, n.d.). Typically disc golf is played on courses in public parks and free of charge, but an increasing number of traditional courses are hosting disc golfers who play alongside regular golfers. There are examples of courses that host traditional golfers, disc golfers, and footgolfers on the same course (Finley, 2015).

AND THE REST OF THE WORLD?

Although this paper has concentrated on the U.S. and Europe, it must be called to attention that the rest of the world has experienced a different supply and demand problem. When a golfer in the U.S. thinks about a large golf market outside the country, one often hears one word "Asia," complete with oft-told tales about tee times booked for years in advance, golfers swinging on Astroturf driving ranges well into midnight, and the boom of Asian pros on the LPGA. "It is odd that golf, a game born in the windswept moorlands of Scotland, should have taken such a hold in South-East Asia. The scorching heat and downpours of the tropics do not lend themselves to long trudges around unshaded fairways and greens. Yet golf's insidious charm has led to a boom in the construction of golf courses all around the region—from well-established golfing zones such as Japan to supposedly communist new frontiers such as China and Vietnam" ("Asia," 1997, p. 85).

Indeed, according to the Royal and Ancient's *2015 Report*, Japan accounts for half of the courses in Asia and has no new courses under development at all due to land need, and that in China "the government imposed a ban on golf course construction in 2004 in an effort to protect the country's land and water resources. The ban, still in effect, applies to all areas of China except Hainan Island, a major tourist area" (R & A, 2015, p. 10). The R & A report also says that South Korea does not have enough public courses for demand; private courses have lost memberships due to extreme taxes of memberships and fees. In fact, "17 countries in Asia have 1 golf facility," (R & A, 2015, p. 11). In other areas of the world, land is not an issue. For example, many courses are being built in Africa, such as in Gambia (Jobe-Nijie, 2011).

SUMMARY

This paper discussed problems facing golf management, the impact of these problems, and initiatives to assist in remedying the situation. The problem is described as one of supply and demand which comprises further concerns of overbuilt golf courses, a decrease in golf participation, and a diminishing number of rounds played. The paper further explains some of the effects the problem had on the golf industry, namely, discounting golf rounds for the purpose of encouraging golfers to play courses that they might not otherwise play and restructuring the ownership of golf courses, whether that be in closing, converting, or selling golf courses for the purpose of financial security. The discussion in the paper also includes a description of some business initiatives strategically designed to attract and retain golfers, and several marketing ideas that were put into action to attract new players to the game. The management and marketing tactics employed to attract new players and golf fans seem to be those which set good examples for business and non-profits.

Questions for discussion:

1. How does the "perishability" characteristic of a service relate to golf, and how can golf course marketers minimize its negative effects on their business?
2. What are some characteristics of millennials that have brought challenges and opportunities to the sport of golf? How have golf course managers adapted to the needs of millennials?
3. Should golf course managers chose between serving the traditional golfer, and the emerging target market of millennials with non-traditional sporting interests? Or can golf courses accommodate both target markets? If so, how?
4. What are the options for a golf course manager who runs a high-fixed-cost business, when being faced with declining capacity utilization and associated declining revenues?
5. How can golf course managers use business process management to be more efficient, more effective and more capable of change than a functionally focused, traditional management approach?

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Table 1: Growth Development of Private, Municipal, and Daily Fee Clubs

Year	Private Golf Course (exclusive membership)	Municipal Golf Course (owned by a tax-supported base--city or county)	Daily Fee Golf Course (open to public)	Total Courses
1931	4,448	543	700	5,691
1941	3,288	711	1,210	5,209
1979	4,848	1,778	5,340	11,966
1999	4,285	2,440	8,470	15,195
2004	4,367	2,406	9,284	16,057
2010	4,262	2,395	9,233	15,890
2012	4,174	2,431	9,146	15,751
2015	3,902	2,480	8,990	15,372

Source: National Golf Foundation. (2016). Cumulative Number of Golf Courses by Year. National Golf Foundation: Jupiter, Florida. Retrieved from http://secure.ngf.org/cgi/faqa.asp

Table 2: Number of U. S. Golf Rounds Played, 1994-2013

Year	Number of Rounds Played (in millions)
1994	418.3
1999	507.6
2000	518.4
2005	499.6
2010	475
2011	463.1
2012	489.5
2013	465.5

Source: National Golf Foundation. (2015b). Golf Participation in the U.S. National Golf Foundation: Jupiter, Florida. Retrieved from http://secure.ngf.org/cgi/faqa.asp

Table 3: Ten of the Largest Golf Management Companies in 2011 & 2016

Management Company	2011 Ranking	Golf Courses in Operation or Development, 2011	2016 Ranking	Golf Courses in Operation or Development, 2016
Troon Golf (Scottsdale, AZ)	1	209.5	1	245.5
ClubCorp (Tokyo, Japan)	5	157.5	2	198
Accordia Golf (Tokyo, Japan)	3	138	3	160.1
Billy Casper Golf (Vienna, VA)	4	131	4	158
Pacific Golf Management (Tokyo, Japan)	2	128	5	156
KemperSports (Northbrook, IL)	7	109	6	124.5
American Golf (Santa Monica, CA)	6	107	7	86
Blue Green Groupe Saur (Saint-Quentin-enYvelines, France)	(Formule Golf, Blue Green merger)	-	8	86
Century Golf Partners/Arnold Palmer Golf Management (Addison, TX)	9	65	9	71
Arcis Golf (Dallas, TX)	8 (as Evergreen Alliance)	73	10	66

Source: Crittenden, J. (2011). 25 Largest Management Companies. *Golf Inc*. pp 26-28. Retrieved from http://www.golfincmagazine.com/news/features/25-largest-management-companies-2011; Largest Golf Management Companies. (2016). *Golf Inc.* Retrieved from http://www.golfincmagazine.com/management-companies

Table 4: Corresponding Tee Color based upon Average Drive, Course Yardage, and Handicap

*Colors for Tees	Average Drive (yards)	Appropriate Course Yardage (30 times average drive)	Women's Handicap
Yellow	Less than 150	4171	30+
Purple	150-175	4963	16-29
Blue	175-200	5887	5-15
Orange	Over 200	6440	0-5

Source: Little, A. D. & Leeming, J. E. (2010). Proportional Tee Positioning for Design Fairness and Fun….and Profit. Retrieved from http://www.golfwithwomen.com/?p=296

Analysis of The Best Practices Followed By The Top Business Schools in The United States When Teaching Business in Spanish

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ABSTRACT

American institutions of higher education are keenly aware that Spanish is becoming one of the world's key business languages and they are consequently beginning to offer courses and programs that combine basic instruction in business and economics with Spanish language and communication skills in a professional context. These programs promise to help students thrive in today's competitive global economy, and they are becoming essential to the practice of teaching and learning Business.

The objective of this paper is to explore the scope, content, and structure of "Business in Spanish" course offerings in the US. To that end, I examine a variety of courses offered by top business schools in the U.S., with an ultimate goal of identifying and learning from the best practices these institutions have followed.

The leading practices identified here fall into five categories: hands on learning, international study, diversity, flexibility, and the application of information and communication technologies. Additionally, this article explores college students' perceptions of the benefits and professional development opportunities of second language study in developing the personal and social skills required by today's business organizations.

Keywords: Business in Spanish, higher education institutions, second language acquisition, managerial skills.

INTRODUCTION

The importance of foreign language study is on the rise in today's globally-interconnected world. Besides the role that foreign language competency can play in achieving high-level objectives--national security goals and international economic competency, for example--learning a second language can have a positive impact on students' cognitive development and, more generally, life skills (Center for Applied Linguistics, 2004; Trimnel, 2005).

Research has shown that second language study benefits not only basic skills development (Lapkin *et al.,* 1990; Ratte 1968) but also higher order, abstract, and creative thinking (Bamford & Mizokawa, 1991; Hakuta, 1986; Landry, 1973). In addition, foreign language study fosters cultural awareness and competency (Carpenter & Torney, 1974; Curtain & Dahlberg, 2004) and enhances career opportunities (Carreira & Armengol, 2001; Weatherford, 1986). A study from Pennsylvania State University argues that the ability of multilingual people to switch between two systems of speech, writing, and structure makes them good multitaskers; researchers trace the source of these improved multitasking skills to the ways in which bilinguals mentally negotiate between or among languages (Penn State, 2001).

According to the Pew Research Center, Spanish is, by far, the most spoken non-English language in the United States. The number of Spanish speakers in the U.S. is growing significantly, and the number of companies owned and operated by Spanish speakers is on the rise. The 2014 Annual Report published by Geospace, in collaboration with the United States Hispanic Chamber of Commerce (Geospace, 2014), states that Hispanic businesses, which contribute nearly $500 billion in revenue to the national economy, are growing at more than twice the rate, compared to U.S. firms as whole. Significantly, the buying power of Spanish speakers is increasing, with Spanish speaking consumers representing the fastest growing market in the country (Jiménez & Narbona, 2012). In the coming years, with a growing population and rapid economic change, Latin America will be one of the major business centers of the world. Consequently, Spanish is rapidly becoming one of the world's key business languages.

Institutions of higher education in the U.S. are well aware of the fact that teaching Spanish for Business provides students with important skills in a globalized world. For this reason, a large number of universities and colleges are already teaching "Business in Spanish," and some of them have developed interdisciplinary programs that combine courses in Spanish language and Hispanic culture with selected courses in business and/or economics. These

programs provide students with a basic understanding of business and economics along with instruction in basic Spanish language skills, in a professional context.

Importantly, these programs all help students to thrive in today's competitive global economy by teaching what have become essential intercultural and communication skills. This paper explores the scope, content, and structure of "Business in Spanish" course offerings in the U.S., examining a variety of course types offered by top U. S. business schools, with an ultimate goal of identifying and learning from best practices followed by top institutions. This paper goes on to explore college students' perceptions of the benefits and professional development opportunities of second language study in developing the personal and social skills required in the 21st-century workplace.

The remainder of this paper is organized as follows: Section 2 reviews and classifies current practices in teaching "Spanish for Business" followed by the top business schools in the U.S.; Section 3 identifies the best practices followed by these institutions; Section 4 discusses the benefits of "Business in Spanish" for college students; and Section 5 concludes.

ANALYSIS OF CURRENT PRACTICES FOLLOWED BY THE TOP 100 BUSINESS SCHOOLS

The classification of current practices in teaching "Business in Spanish" followed by the top 100 business schools in the U.S. is based on a review of 100 institutions compiled from the Ranking: Best Undergraduate Business Schools 2014, published by *Bloomberg Business Week* (http://www.bloomberg.com/bschools/rankings/#5).

The course offerings identified and analyzed can be classified into three main categories:

- **First level**: this is the most advanced level and includes the business schools that offer "Business in Spanish" degrees (34% total sample). There are many different options at this level, ranging from Business Spanish Minors and certificates in Spanish Studies for Business Majors (offered by language departments) to bachelor's and master's degrees.

  At this level, collaboration is a common practice, because business schools typically offer "Business in Spanish" degrees in partnership with departments of foreign languages. Sometimes, collaboration goes beyond the limits of the university and involves partnerships with international institutions from Spanish speaking countries. A good example of this would be Georgetown University. Georgetown offers a degree in Global Entrepreneurship & International Marketing in partnership with ESADE (*Escuela Superior de Administración y Dirección Empresas*), a prestigious Spanish business school. Similarly, Northeastern University offers the option of completing part of the Bachelor of Science in International Business in ICADE (*Instituto Católico de Administración y Dirección de Empresas*), one of the most highly-regarded business schools in Spain. St. Louis University goes one step further and has its own campus in Madrid, where students from more than 65 countries may enroll in undergraduate & graduate courses toward either a U.S.-based 4-year undergraduate degree, graduate degree or, in the case of study abroad students, credits towards degrees at their home institutions.

- **Second level**: this group (52% total sample) is comprised of institutions that offer "Business in Spanish" courses, typically through their language departments. The most common titles are: "Spanish for Business," "Business in Spanish," "Commercial Spanish," and "Spanish for Professional Purposes: Business." Other courses, such as "Business communication and correspondence," and "Business writing in Spanish," are heavily focused on the development of oral and written communication skills. A third category of courses (including "Language and Culture in Business," "The economy and politics of Latin America," "Latin American Culture in a Business Context") concentrates on the cultural aspects of Spanish speaking countries.

  Some of these courses have an international travel component that allows students to explore an alternative business, government, or cultural paradigm in order to better appreciate the differences and similarities in business environments and, ultimately, to make more informed business decisions. Courses such as "International Consulting: Latin America," "Spain & Portugal Start-up Strategy," and "Chile & Peru: Analyzing Entrepreneurial Opportunities in Latin America," are usually divided into two different segments. During the first weeks of the semester, students complete a research project in the USA about a company from a Spanish speaking country. They prepare a recommendation/evaluation report using libraries, databases, interviews, and international communication via phone, fax, and email. The final part of the course involves a visit to the client's office to deliver their presentation in person.

The final subgroup of courses focuses on topics that are becoming very popular in the business field, such as social innovation ("Spanish for social innovation"), corporate social responsibility ("Sustainability and Corporate Social Responsibility in Costa Rica") and entrepreneurship ("Spanish and Entrepreneurship").

- **Third level**: this category (14% total sample) includes business schools that offer courses in "Spanish and Business" separately but do not offer courses that combine the two fields. At this level, the best options for students who want to develop a career in Spanish speaking companies or countries would be either to combine a Spanish major with a Business minor, a Business major with a Spanish minor, or to double major in Business and Spanish.

BEST PRACTICES

An analysis of the data reveals a variety of best practices, which may be classified into two main categories: 1) methods of delivery; and, 2) program attributes that maximize potential benefits.

Methods of delivery.

- Hands on learning: hands on learning allows students to make connections between what happens in the classroom and their lives and the outside world. In addition to case studies, which have long been used in business schools, the educational institutions in this study offer a wide variety of opportunities to explore the application of business concepts to real world scenarios, such as simulations, case studies, internships in Spanish speaking companies, or Community Based Learning.

  According to the *Glossary of Education Reform,* "Community-Based Learning (CBL) refers to a wide variety of instructional methods and programs that educators use to connect what is being taught in schools to their surrounding communities, including local institutions, history, literature, cultural heritage, and natural environments." Many studies have demonstrated that CBL (or service learning) has a positive effect on students' personal development, on their interpersonal skills, on their ability to work well with others, and on their leadership and communication skills (Astin & Sax, 1998, Astin *et al.,* 2000, Driscoll *et al*., 1996, Giles & Eyler, 1994). In addition, research has shown that service learning has a positive impact on students' learning because it improves their ability to apply what they have learned in "the real world," and contributes sigificantly to their career development (Keen & Keen, 1998; Markus, *et al*. 1993; Tartter, 1996; Vogelgesang & Astin, 2000).

  Institutions of higher education, aware of the benefits, are offering an increasing number of CBL courses. For example, the University of Illinois, Urbana-Champaign offers a course titled "Spanish & Entrepreneurship," where students do community-based learning in non-profits serving the local Spanish-speaking community, thereby building language skills, acquiring cultural knowledge, and gaining hands-on experience with social entrepreneurship. Another example is the course, "Business Spanish I (Service Learning)," offered by Belmont University. In this course, students conduct research about the Nashville Hispanic Community, volunteer at least 8 hours for a Hispanic business or non-profit organization, and learn Spanish vocabulary related to business organizations, practices, and cultures.

- Study abroad programs: these types of programs are an invaluable resource when learning a foreign language. Besides increasing their foreign language fluency, students have the opportunity to strengthen their cross-cultural communication skills and their analytical skills, because the interaction with locals abroad requires them to analyze new situations with precision and realism. At the same time, these interactions, which usually involve adapting to new circumstances, increase their international knowledge base, flexibility, and problem solving skills, as well as their ability to work as part of a team and even, where appropriate, take on leadership roles. As a result, students who study abroad gain a competitive edge that will increase their job prospects (Dwyer, 2004; Norris & Gillespie, 2009).

  Similarly, the Institute for the International Education of Students (IES Abroad) conducted a survey in March 2012 to assess the impact study abroad has on recent graduates' prospects in securing employment and/or attending graduate school directly after earning four-year college or university degree in the United States. This research found that study abroad may be one of the best ways for college students to find jobs--sooner after

graduation, related to their majors, and at a higher starting salary. Another finding of the survey was higher acceptance rates to graduate and professional schools for students who studied abroad (IES Abroad, 2012).

- Internships in Spanish speaking countries: this best practice combines hands on learning with international study. Participating in an internship while studying abroad has a significant impact on students' career development and on some aspects of their intercultural development. According to the IES Abroad 50-year Alumni Survey, overseas internships have a significant impact on subsequent career choices and on the development of specific skillsets for the workplace. This survey also showed that these internships correlate with higher levels of intercultural competence, as measured by continued contact with host nationals, involvement in community activity, and sustained engagement in exploring other cultures.

Attributes of the programs that link Business and Spanish.

- Flexibility: business schools should be flexible in order to adapt their curriculum to the educational needs of their students. Students' level of proficiency and knowledge of foreign languages is different. For that reason, it is desirable to create elementary-, intermediate-, and advanced-level courses of "Business in Spanish." However, "Business in Spanish" should not be the only option available to those students who want to develop future careers in Spanish speaking companies or countries. They should have the option of taking additional courses focusing on a variety of topics, such as the culture and politics of Latin American countries, corporate social responsibility, entrepreneurship, or social innovation. Everyone processes and learns new information in different ways, so, if we want to reach the majority of our students, we should try to incorporate various approaches into our teaching. Collaboration between professors from different areas and departments should also be encouraged.

  Students' background and previous experiences should be considered as well. Many of the schools analyzed in this research offer courses for "heritage language students." According to Valdés (2001), heritage learners are (1) raised in homes where a non-English language is spoken; (2) either speak or merely understand the heritage language; and (3) are to some degree bilingual in English and the heritage language. These "native speakers" have learned the language from their families and friends in the way that native speakers acquire the language. In contrast, "Second Language Learners" are taught from books, with structured language lessons. Since their learning styles are different, they need specific courses that can address their linguistic needs. Additionally, and following the recommendation given by Wiley *et al.,* (2012), the use of untapped heritage language speakers in foreign language immersion programs should be encouraged, a strategy that can leverage heritage speakers in the classroom while helping them retain their own language skills.

- Information and Communication Technologies (ICT): ICT, when properly used to support an existing educational system, has the potential to enhance the learning process by extending the traditional boundaries of the classroom. ICT-supported learning promotes active learning, allowing students to choose what and when they need to learn and encouraging interaction and cooperation among learners, educators, and experts, regardless of their specific location (Bates, 2000).

  Web 2.0 provides a wide variety of online resources, such as social network sites, blogs, wikis, folksonomies, and virtual communities, that allow users with common interests to meet, share ideas, and collaborate (Brown & Adler, 2008; Maloney, 2007). Several research studies have illustrated how social network sites[3] can improve the learning experience by enabling interaction, collaboration, active participation, information & resource sharing, and critical thinking (Mason, 2006; Selwyn, 2009; Tapscott & Williams, 2010).

  "Business in Spanish" courses should take advantage of the potential of ICT in general--and social networking tools in particular--to enhance the teaching-learning process. In fact, all the institutions analyzed capitalize on the benefits of ICT and use a wide variety of ICT-supported tools, such as conference calls, email, databases, course management systems, blogs, and forums. Language education social network sites, such as Live Mocha,

[3] According to Boyd and Ellison (2007), social network sites (SNSs) can be defined as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system."

Busuu, and Italki, are particularly useful when learning a new language because they promote interaction with native language speakers from around the world.

- Diversity: research has consistently shown that students who experience the highest level of exposure to different dimensions of diversity[4] report the greatest gains in thinking complexity, reflective thinking, and critical thinking (Gurin *et al.,* 2004; Pascarella *et al.*, 2001).

  According to Thomson & Cuseo (2014), diversity should be promoted on college campuses because it expands worldliness and enhances personal and social development. As a consequence, students will be better prepared to work in a global society and will have brighter job prospects. Moreover, the authors state that diversity promotes creative thinking because it allows students to analyze problems from multiple perspectives and vantage points. The business world is also acutely aware of the fact that a diverse and inclusive workforce is necessary to drive innovation, foster creativity, and guide business strategies. A survey conducted by *Forbes* revealed that 85% of survey respondents agreed or strongly agreed that diversity is essential to driving innovation in the workplace (*Forbes Insights,* 2011).

The benefits of diversity can be even greater for students who take courses like "Business in Spanish," which focus on international and cultural topics. The continuous interaction with foreign professors and classmates, especially from Spanish speaking countries, can promote language fluency through a wide variety of strategies, such as tandem programs. In language tandems language learning is promoted through student partners who share their native languages and cultures. The concept of language tandems is that international students can learn and practice English and become familiar with the American culture, whereas American students can learn and practice Spanish and begin to internationalize themselves.

BENEFITS OF BUSINESS SPANISH FOR COLLEGE STUDENTS.

The last part of this paper, based on my own teaching experience, explores college students' perceptions of the benefits of second language learning in developing essential personal, social, and profesional skills.

After carefully analyzing the personal, social, and professional skills required by business organizations, it can be concluded that college students greatly benefit from second-language study. According to the American Institute of Certified Public Accountants (AICPA), the International Federation of Accountants (IFAC, 1998), the National Association of Colleges and Employees (NACE, 2010), and the International Accounting Education Standard Board (IES), effective application of knowledge requires critical thinking and problem solving skills as well as cross-cultural and language abilities. In addition, professionals need to be receptive to the ideas of others so that they can communicate and collaborate with people from different backgrounds.

All of these skills are fostered by second language study, as the previous research cited demonstrates. Most of these studies have focused on the positive impact that language learning can have on primary and secondary education; however, similar outcomes can be observed at the college level. This section analyzes the benefits of a specific course for college students and summarizes their experiences and perceptions. The course, "Business in Spanish," was offered in the spring semester of the 2014-2015 academic year. A total of twelve students (nine Business majors and three non-Business majors) enrolled in this course. This course, offered by the Business Administration Department of a selective liberal arts college located in the North East, was listed as an elective and, although the course was not restricted to Business majors, an understanding of business terminology was expected. Because of the small number of students surveyed, conclusions must be tentative and approached with caution. And yet the results are suggestive of a significant pattern.

Students' perceptions of the benefits of second language learning were explored through an online survey that was administered as part of the course evaluation process developed by the college. Students were asked to assess how the course helped them develop their skills and abilities on a scale from 1 to 5, with one indicating strong disagreement and five expressing strong agreement. The analysis of students' responses for the course "Business in

[4] The dimensions of diversity include gender, religious beliefs, race, marital status, ethnicity, parental status, age, education, physical and mental ability, income, sexual orientation, occupation, language, geographic location, and many more components (Penn State of Agricultural Sciences, 2001).

Spanish" (see Table 1) revealed that students strongly concur with the conclusions stated by the previously cited research on the benefits of language learning.

Table 1: Excerpts from course evaluations.

- **This course required me to do at least one of the following (on a scale of 1 to 5):**

	Response Count	Mean	Median	Standard Deviation
1. Think at a deeper level or use critical thinking	12	4.42	4.00	+/-0.51
2. Use problem solving	11	4.36	4.00	+/-0.50
3. Acquire a new skill	12	4.75	5.00	+/-0.45

- **The types of assignments completed in this course and the feedback provided by the instructor has enabled me to improve in some of the following skills and abilities (scale 1 to 5):**

	Response Count	Mean	Median	Standard Deviation
1. Writing	12	4.25	4.00	+/-0.45
2. Public speaking/ oral presentations	12	4.58	5.00	+/-0.51
3. Qualitative and/ or quantitative analysis	12	4.17	4.00	+/-0.72
4. Working collaboratively	12	4.67	5.00	+/-0.49
5. Integrating and applying knowledge from different disciplines	12	4.67	5.00	+/-0.49
6. Examining questions that matter beyond the classroom	12	4.75	5.00	+/-0.45
7. Exploring differences (e.g. racial, ethnic, gender inequality)	12	4.58	5.00	+/-0.51
8. Reflecting upon my experiences	12	4.67	5.00	+/-0.65

According to their survey responses, my students concluded that "Business in Spanish" required them to think at a deeper level or use critical thinking, practice their problem solving skills, and acquire a new skill. As a consequence, they reported that the course helped them improve personal, social, and professional skills, such as communication and presentation skills, the ability to work in teams, and decision-making skills. In addition, they stated that the course helped them to reflect upon their experiences and become more culturally sensitive and aware.

CONCLUSIONS

Institutions of higher education in the U.S., aware of the benefits of foreign language study and of the increasing number of Spanish speakers and Spanish-speaking companies, are presently offering a wide variety of courses and programs that provide students with a basic understanding of business while learning to communicate in Spanish in a professional context.

Our analysis of current practices followed by the top 100 business schools reveals that all of the institutions offer Spanish and Business, although the levels of integration vary. A variety of options are available, ranging from not offering a course in "Business in Spanish" (but allowing students to take courses in both fields) to offering an extensive array of courses and degrees that integrate Business and Spanish.

The best practices identified can be classified into five categories: hands on learning, study abroad programs, diversity, flexibility and ICT. Based on the philosophy of "learning by doing," schools should offer a wide variety of activities that explore how business concepts can be applied to real world situations, such as simulations, case studies, internships in Spanish speaking companies, or community based learning. Study abroad programs can be particularly beneficial because they allow students to improve their language fluency while honing their social and problem solving skills.

Flexibility should be one of the guiding principles when creating "Business in Spanish" courses and degrees that respond effectively to students' individual needs. This flexibility can be enhanced by the use of ICT, which has the potential to enhance the learning process by extending the traditional boundaries of the classroom.

As a final recommendation, diversity should be promoted and fostered in higher education, because diversity, in its most positive sense, strengthens students' foreign language proficiency and interpersonal communication skills, both of which are essential in our globalized society.

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Cost Accounting: Linking Necessary Concepts

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ABSTRACT

Cost accounting textbooks are designed to introduce a concept in each chapter. Many students approach these chapters as standalone concepts and have a difficult time understanding the big picture of cost accounting and how all the concepts work together inside a real business. One of the AICPA's Core Competencies is linking data and transferring knowledge from one situation to another. While the focus is linking concepts from multiple business decisions, students have to start by doing this within one course. In this paper I present information on the retention of basic cost accounting concepts over the course of one semester and the ability of students to put the information together. The paper includes examples of problems that can help students see the linkages and an end of semester project that requires the use of multiple basic cost accounting concepts.

Keywords: cost accounting, linking concepts

INTRODUCTION

Traditional cost accounting textbooks present concepts in packets of material called chapters with very little interaction between the chapters. Concepts are taught in isolation with very little guidance on how the concepts should actually be linked to make correct business decisions. Further, suggested test questions only test the concept in isolation. An exam may cover multiple chapters, but a student learns to use the concepts in isolation. This does not prepare the student for a real life business situation. In this paper, I look at the ability of students to put multiple cost accounting concepts together to answer a comprehensive accounting problem. I then further suggest an end of semester review project that not only allows for review of multiple concepts; it makes the students think about how the concepts are related.

There has been criticism of accounting education in general because of the focus on mechanical procedural approaches and emphasis on narrow packets of information (American Accounting Association [AAA] 1986, Accounting Education Change Commission, 1992) and a through a joint study with the AAA, the Institute of Management Accountants and the American Institute of Certified Public Accountants it was concluded that current accounting education was not designed to adapt to changes in the business environment (Albrecht and Sack 2000). More recently, members of the Institute of Management Accountants and members of the Management Accounting Section of the American Accounting Association teamed up to address competency issues in accounting education and made suggestions on competency integration (Brewer, et al. (2014) Lawson et al. (2014), Lawson et al. (2015)). Traditional approaches to accounting education limit the ability of the student to move to the higher levels of learning and decision making that is necessary in the current business environment.

Duff and McKinstry (2007) reviewed students' approaches to learning. In their paper they discussed a "deep" and a "surface" approach to learning. "Surface" approach to leaning is more associated with memorizing/reproduction and applying while "deep" is more associated with understanding, relating ideas/concepts, and looking for meaning within the material. Using traditional textbooks and testing procedures does not encourage (and possibly discourages) the "deep" approach to learning. While studying a particular chapter a student is not encouraged to relate the new material to previous concepts and testing procedures encourage memorizing a specific procedural approach that they can use to earn the desired grade.

In the next section I will be focusing on an undergraduate cost accounting course. Arguments can be made that it is necessary to move completely away from traditional textbooks and traditional examinations, but that may be too much of a paradigm shift in accounting education at the start. I will argue that some less extreme changes can be made now so that students, at a minimum, develop the skills to apply what they learn to multiple situations and to be able to combine multiple concepts that exist within just one subject.

THE PROBLEM

A typical cost accounting text book will cover cost-volume-profit analysis, job costing, process costing, activity based costing, budgeting, cost behavior, variances, and other concepts under various headings. The normal layout

tries to build upon complexity not necessarily a typical business process. Despite how the textbook is organized or how the instructor covers the textbook, the student should be able to see the larger picture and put two concepts together. This is not always the case.

To understand how cost accounting students are able to apply concepts learned during the course of the semester to a new situation, I developed a comprehensive exam question (Exhibit 1) that brought in multiple concepts together into one problem. The problem was tested in three sections of an undergraduate cost accounting course over three semesters. The mean score for the whole problem was 71% (n=215) and that goes down to 68.9% when the two basic questions on prime and conversion cost are removed.

Exhibit 1 – Comprehensive Problem

Mikey & Jack's Adventures (MJA) Inc. has one production department. At MJA, all materials are added at the beginning of the process. Labor and overhead are added evenly throughout the process. The following information pertains to work in process for April

	Physical units	**Materials**	**Direct Labor**	**Overhead**
Beginning work-in-process inventory	1,900 units (40% complete)	$50,650	$26,199	$21,833
Units completed	16,000 units			
Ending work-in-process inventory	1500 units (60% complete)			

Added during April:
Direct Materials $219,200 (8,000 pounds @ $27.40 per pound)
Direct Labor 7,250 hours @ $12 per hour
Overhead is applied using a predetermined rate of $10 per direct labor hour

Additional Information:

- There was not any beginning Finished Goods inventory for April.
- MJA sold 15,000 units @ $40 each
- MJA expected to sell 14,000 units @ $45 each
- For actual production MJA expected to use 7,400 hours of DL @ $11.90 per hour
- For actual production MJA expected to use 9,500 pounds of raw materials @ a cost of $23.50 per pound
- MJA had variable Selling & Administrative expense of $5 per unit
- MJA had fixed Selling & Administrative expense of $27,000

Required:

1. What is the amount of the total prime cost added during April?
2. What is the amount of the total conversion cost added during April?
3. Determine the number of units started in April.
4. Compute the equivalent units using the weighted-average method.
5. Compute the cost per equivalent unit using the weighted-average method.
6. Compute the costs of goods transferred out to finished goods and the ending work-in-process inventory using the weighted-average method.
7. Compute the cost of goods sold (total and per unit)
8. Create a contribution margin income statement for MJA (treat the COGS per unit as variable cost)
9. Calculate the Direct materials usage and price variance (indicate favorable or unfavorable)
10. Calculate the Direct Labor usage and price variance (indicate favorable or unfavorable)

While the student is presented multiple pieces of information and has to be able to pick out the appropriate pieces of information for each question, most of the problem is still similar to chapter based work. There are two questions that require the student to integrate a concept from one chapter to another concept initially covered in a different chapter. On question seven students are asked to combine process costing with cost of goods sold. Traditionally, process costing textbook chapters focus on transferred-out cost to the next process. They even usually have a discussion on finishing the last process and transferring the cost to finished goods, but most stop there and do not

take the concept all the way to the sale of such goods (e.g. Horngren, et al 2015, Kinney and Raiborn 2012). Students in cost accounting are usually presented cost of goods sold in the chapter that covers the cost of goods manufactured and sold statements, often at the beginning of the semester. In this simple problem with no beginning inventory, all the student has to do is take the cost flows one step further. The problem requires the student to realize that once the product reaches finished goods that manufacturing cost have ended. Students have to successfully calculate cost per unit to transfer the cost to finished goods. Then to answer problem seven all they have to do is take that cost per unit and multiply it by the number of units sold. Simple enough, but the mean score on problem seven was only 47.7%.

Question Eight does take a detour from reality and states that there were no fixed cost in the manufacturing process. This is in order to keep things simple when creating a contribution margin income statement; cost of goods sold can be viewed as a variable cost. To create the contribution margin income statement the student only has to take the cost of goods sold amount from question seven, and the information given as to the selling and administration cost. To keep grading fair, the answer (right or wrong) the student gives for question seven was carried through to question eight. This basic concept using multiple pieces resulted in a mean score of 68.8%.

The scores on this comprehensive problem indicate that students are either forgetting material as the semester proceeds or are unable to combine multiple concepts and complete a comprehensive problem. Table 1 presents the mean scores for the various parts of the problem

Table 1 - Mean Question Scores

Question #	Mean Score (n=215)
1	86.0%
2	83.7%
3	76.7%
4	73.3%
5	67.4%
6	70.2%
7	47.7%
8	68.8%
9	68.8%
10	70.1%

SUGGESTION FOR HELP

To overcome the problems of forgetting material or the inability to fit multiple concepts together I suggest that a comprehensive style case be used at the end of the semester. Many of the currently available cases are either too complex for the first course of undergraduate cost accounting or only one or two concepts are covered in the case. One quick way to develop a comprehensive style problem is to combine two or three problems from multiple chapters that can be related and combine them into one problem. Exhibit 2 is an example of a problem used in an online class. This problem combines cost estimation (High-low method) and break-even analysis. I have also included some feedback from students on this problem that illustrates how they were not thinking about how multiple concepts fit together.

Exhibit 2 – Sample Multi-concept problem

	Units Produced	Total Cost
Year 1	50,000	425,000
Year 2	60,000	480,000

1) Calculate variable cost and fixed cost using the high-low method:

2) How many units must be sold to break even at the sales price of $10?

3) Create a contribution margin statement for 55,000 units $10 sales price

Answers

1) Variable rate $5.50, fixed cost $150,000

2) 33,333.33 → 33,334

3) CM = $247,500, income = $97,500

Another approach is to create a comprehensive review problem that covers multiple concepts from the perspective of a small company. An example of such a problem is illustrated in Exhibit 3. This problem takes the student through direct cost, overhead, cost estimation, cost-volume-profit relationships, budgeting, process costing, variances, and a special order decision. The problems could be completed in groups, as a take-home project or simply reviewed in class.

Exhibit 3 – Review Project

Given information:

1. Your company produces a basic potato chip. There are three main processes used in the chips. The first process washes and peels the potatoes. The second process slices and fries the potatoes. The third process seasons and packages the chips. The potato chips are sold in 12 oz bags (1 bag is a unit)

2. Information on the direct materials is listed in Table 1 below. Consider this information the standard.

3. Direct labor information given in Table 2 below. Consider this information the standard.

4. Annual overhead information is given in Table 3 below. Overhead is allocated based direct labor hours. Estimated annual direct labor hours are 12,500. Calculate a predetermined OH rate (round to two decimal places if needed). Use this rate when you need to apply OH.

5. Table 4 below gives you the information for the last two months on the overhead cost. Use this information to determine the fixed and variable portions of the cost. (You will need this information to complete Table 5). Machine hours have been determined as the best cost driver for separating mixed cost into their fixed and variable portions. It takes approximately 12 minutes of total machine time for each bag of chips (or 1/5 a machine hour per bag of chips).

6. Table 5 below is where you will list all your production cost, separated into their fixed and variable components.

7. Cost-Volume-Profit (CVP) Relationships
   a. Selling Price: You sell a bag of chips for $4.00
   b. Breakeven point: Calculate the breakeven point. Be sure to include the fixed component of mixed cost in your fixed costs and the variable component in the variable cost. Show your breakeven in Sales units and in Sales Dollars
   c. Profit Planning: Determine the number of units you must sell to make an annual pre-tax profit using 3 assumptions concerning your net income (profit), both in sales units and sales dollars.
      i. Aggressive Profit ($100,000)
      ii. Conservative Profit ($25,000)
      iii. Average Profit ($60,450)

8. Budgeting:
   a. Create a sales budget using the information for earning an average profit for the year. You will break the budget down into the four quarters for the year. (Sales tend to be consistent each quarter, you can only sale a whole unit so round-up if necessary)
   b. Create a production budget for each quarter of the year (keep it in quarters; you do not need to break it down by month). You desire to keep 10% of next quarter's sales in ending inventory. Sales for Qtr 1 the following year are expected to be 30,000 bags of chips. There is not any beginning finished goods inventory for quarter one.

9. Running quarter one -- Weighted-average process costing. Table 6 below presents the information for the packaging department. Complete the questions under Table 6 below.

10. Actuals are in for quarter one. You sold 25% more units than you budgeted for, but price per unit was only $3.80.
    a. Calculate revenue
    b. Compute the cost of goods sold (total and per unit) before adjusting for actual OH cost
11. Actual potato usage for quarter one was 68,000 pounds at a price of $0.45 per pound. Actual equivalent units of production (bags of chips) completed through the fist process (where the potatoes are added) was 29,520. Calculate the direct materials variances for the potatoes (price, usage, and total) and indicate if these variances are favorable or unfavorable.

12. Actual direct labor hours for the quarter were 4,830 at an average rate of $8.10 per hour. For actual production you expected to use 4,200 direct labor hours. Calculate the direct labor variances (rate, efficiency and total) and indicate if these variances are favorable or unfavorable.

13. For next quarter you have been asked to supply a special order of you potato chips. The non-profit organization requesting this order would like a special bag that will cost $0.20 instead of the normal $0.10 per bag. The request is for 10,000 bags of chips. Based on your projections you have the capacity for this order. What is the minimum price per unit and total price you would be willing to accept on this order? (You cannot afford to take this offer at a loss, but you are fine with accepting it at cost).

14. Determine over- or under-applied overhead and close to cost of goods sold. Actual OH cost are given in Table 7 (look at #12 for actual DL hours used to apply OH). Determine the new cost of goods sold amount.

Table 1: Direct Materials

Material	**Quantity per unit**	**Cost**	**Total per unit**
Potatoes	2 lbs	$0.48	$0.96
Seasoning	0.1 ounces	$0.50	$0.05
Packaging	1 bag	$0.10	$0.10
	1/12 box	$0.48	$0.04
TOTAL			$1.15

Table 2: Direct Labor

Job Description	**Hours per bag of chips**	**Rate**	**Total cost**
Potato Washer & Peeler	.05	$8.00	$0.40
Slicer & Fryer	.04	$8.00	$0.32
Packager	.05	$8.00	$0.40
Total	0.14		$1.12

Table 3: YEARLY OVERHEAD COSTS

Cost Description	**Total Cost**
Indirect Materials	$6,000
Indirect Labor	60,010
Machine Maintenance	4,040
Electricity	3,440
Depreciation	4,680
Quality Testing	10,160
TOTAL	$88,330

Table 4 – Actual Overhead cost for the last two months

	Month 1	Month 2
Indirect Material	$500	$500
Indirect Labor	$5000.83	$5000.83
Machine Maintenance	$250	$290
Electricity	$200	$240
Depreciation	$390	$390
Quality Testing	$630	$730
Machine Hours*	1000	1200

*12 minutes of machine time per bag of chips (1/5 hour = 1 unit)

Table 5: Variable and Fixed Costs

COSTS Description	VARIABLE Cost per unit	FIXED Cost per Year
TOTAL		

If a cost is mixed, put the fixed amount in the fixed column and the variable amount in the variable column.

Process Costing – Packaging Department
Direct materials are added 70% at the beginning of the process and the remaining 30% are added when the chips are 50% complete with the packaging process. Direct labor and overhead are added evenly throughout the process.

Table 6– Unit and cost information

		Cost			
	Physical Units	Transferred -in	Direct Materials	Direct Labor	Overhead
Beg WIP	1,000 (40% complete)	$2,450	$110.40	$165	$141.44
Transferred In	30,000	$73,500			
End WIP	2,200 (30% complete)				

Added during Qtr 1:
Direct Materials -- $4,835.02
Direct Labor – 1,580 hrs @ $8.10 per hour
Overhead – OH is applied based on predetermined OH rate and actual DL hours

1. Determine the number of units completed during quarter 1.

2. Compute the equivalent units using the weighted average method

3. Compute the cost per equivalent unit using the weighted average method

4. Compute the cost of goods transferred to finished goods inventory

5. Compute the ending balance in WIP, Packaging

Table 7 – Actual OH cost for Quarter 1

Description	Cost
Indirect Materials	$1,750
Indirect Labor	$15,000
Machine Maintenance	$1,416.20
Electricity	$1,235.75
Depreciation	$1,050
Quality Testing	$4,615

1. Amount of applied OH:

2. Amount of actual OH:

3. Under or Over- Applied Amount:

4. New COGS amount:

Answers

4. Calculate a predetermined OH rate: 7.07 (rounded)
5. Fixed: Indirect Materials, Indirect Labor, Depreciation. Variable: Electricity ($.04 per unit). Mixed: Machine Maintenance ($.04 per unit & $600 per year), Quality Testing ($.10 per unit, $1560 per year)
6. Variable cost per unit: $2.45. Annual Fixed cost $72,850.
7. Cost-Volume-Profit (CVP) Relationships
   d. Breakeven point: 47,000 units $188,00 sales dollars
   e. Profit Planning:
      iv. Aggressive Profit: 111,517 units $446,064.52 sales dollars
      v. Conservative Profit: 63,130 units $252,516.13 sales dollars
      vi. Average Profit: 86,000 units $344,000 sales dollars
8. Budgeting:
   c. Sales Budget: Each Quarter 21,500 units X 4 = $86,000
   d. Production Budget:

	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Sales	21,500	21,500	21,500	21,500
Des End Inventory	2,150	2,150	2,150	3000
Needs	23,650	23,650	23,650	24,500
Beg. Inventory	0	2,150	2,150	2,150
Production	23,650	21,500	21,500	22,350

9. Process costing
   a. Units completed: 28,800
   b. Equivalent units: TI 31,000, DM 30,340, Conv 29,460
   c. Cost per Eq Unit: T1 $2.45, DM $0.163, Conv $0.824
   d. Finished Goods Inv: $98,985.60
   e. Ending WIP: $6,184.86
10. Actuals are in for quarter one.
    c. Calculate revenue $104,006.25
    d. COGS $92,369.38
11. DM Variances
    a. Price $2,040 Fav
    b. Usage $4300.80 Unfav
    c. Overall $2260.80 Unfav
12. DL Variances
    a. Rate $483 Unfav
    b. Efficiency $240 Unfav
    c. Overall $723 Unfav
13. Cost per unit $2.55. Minimum to accept the order $25,500
14. Overhead
    a. Applied OH: $34,148
    b. Actual OH: $25,067
    c. Overapplied OH $9081
    d. COGS: $83,288.23

CONCLUSION

Before future accountants can achieve the AICPA Core Competency of "the ability to link data, knowledge, and insight together from various disciplines to provide information for decision-making" (AICPA, 2008; AICPA, 2012) they need to be able to simply link data and knowledge from one discipline. Undergraduate students struggle with this as illustrated in a basic comprehensive cost accounting problem. One reason for this could be traditional teaching methods and textbooks encourage "surface" learning. Until the accounting education community is ready to change the use of textbooks and testing methods in undergraduate accounting courses something has to be done to encourage the use of "deep" learning.

I suggest the use of a comprehensive problem or case to at least end the semester reviewing what was covered and a method of presenting the concepts in a big picture. It would be better to incorporate such cases and problems throughout the semester after multiple related chapters have been covered. The ultimate learning environment would consistently link concepts possibly in a more Internet type manner focusing on decision making rather than rote memorization of mechanical procedures.

The next step will be to analyze the results of using the comprehensive review problem; does the problem lead to better ability in linking concepts. From there a better environment for "deep" learning can be created.

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Critical Thinking Development Through Teaching: A Sample Project in Accounting

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ABSTRACT

Critical thinking is an important component of business education. We argue for the use of students educating others outside the academic setting as a means to develop not only content knowledge but also critical thinking skills. The paper presents a project that has been used in an internal audit class as an example of students learning through teaching others. In this project, students investigate the cash controls of non-profit organizations, prepare written materials oriented toward teaching these organizations about proper cash controls, and then use these materials to teach the leaders of the organizations about effective cash management. Learning objectives include content objectives such as developing an understanding of internal controls, risk assessment, and cash management, as well as critical thinking objectives and professional development objectives. Student survey responses indicate that the project was favorably received, enhanced critical thinking, and achieved desired learning objectives. The project differs from peer teaching in that students are teaching others outside the academic environment, which creates a different environment for learning. Likewise, the project differs from traditional service-learning where students do the work rather than teach others to do the work. Both these aspects enhance student opportunities to learn critical thinking skills.

Keywords: Accounting education, Auditing education, Critical thinking, Service-learning, Peer teaching

INTRODUCTION

Few will argue that critical thinking is not a valuable asset for business professionals and that the need for critical thinking skills is increasing as society becomes more technological. The challenge to academics, both the academy at large and academic professionals, is how to develop student critical thinking skills. It is commonly believed that critical thinking skills must be purposely taught (Nickerson, 1987; Kurfiss, 1988; Oliver and Utermohlen, 1995) and many ideas have been put forth as to how to teach critical thinking skills. *Teaching of Psychology* (Volume 22, issue 1) devoted an entire issue in 1995 to teaching strategies to help promote critical thinking. It included such pedagogical tools as: cooperative learning strategies (Cooper, 1995), case study and discussion methods (McDade, 1995), Socratic questioning (King, 1995), conference-style learning (Underwood and Wald, 1995), and writing assignments (Wade, 1995). Others have recommended the use of ambiguity (Strohm and Baukus, 1995) and dialogue methods (Robertson and Rane-Szostak, 1996). Similar strategies have been applied in accounting (Kimmel, 1995; Kern, 2000; Sullivan, 1996; Camp and Schnader, 2010). Bonner (1999) suggests that a variety of teaching methods are important and that specific teaching methods be selected based on specific learning objectives. She states, "A single teaching method typically cannot create all the conditions necessary for a given learning objective" (Bonner, 1999, p. 36).

In this paper, we argue for another method to enhance student critical-thinking skills—learning through teaching others. The concept of teaching to learn is not new. Centuries ago, Seneca the Younger wrote to Lucilius "Docendo discimus," Latin for "by teaching we learn" (Epistulae Morales ad Lucilum, 1, 7, 8). For years, medical education has used a "see one, do one, teach one" model with the goal of producing critical thinkers (Ludmerer, 1996). Recently, Law schools are considering this model as well (Coughlin, 2009). We argue learning through teaching others is also an appropriate model for use in business education.

Teaching provides students with the opportunity to learn the content more thoroughly, as well as to respond to ambiguity and uncertainty in the learning process. The traditional learning by teaching models focus on peer teaching, which is defined as students teaching other students and commonly includes: teaching assistants, tutors, counselors, partnerships or work groups (Whitman, 1988; Bargh and Schul 1980; Rubin and Herbert, 1998; Leelawong, *et al.*, 2001). This paper recommends a different kind of teaching. Rather than peer-to-peer teaching, we focus on student-to-layman teaching in a non-academic setting. The purpose of this kind of teaching is to expand the scope of benefits beyond content acquisition and into critical thinking development. Students develop

better critical thinking skills when dealing with others dissimilar from themselves in an ambiguous, unfamiliar environment.

The project presented involves educating non-profit organizations about cash controls. This is a form of service-learning because students are actively involved in the community, doing meaningful work. However, it differs from traditional service-learning where students simply do the work. In this project, we advocate teaching the non-profit organizations and enabling them to do the work themselves once the project is completed. As compared with teaching, performing (or doing) service work provides fewer opportunities to interact with the organization and to respond to feedback and criticism. By teaching, we believe students develop more critical thinking skills than if they simply did the service work for the organization.

CRITICAL THINKING FRAMEWORK

When examining the vast literature on critical thinking, various definitions of critical thinking appear. Scriven and Paul (1996) define critical thinking as " the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action". Kurfiss (1988, p. 42) defined critical thinking as "an investigation whose purpose is to explore a situation, phenomenon, question, or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that can therefore be convincingly justified". "Most formal definitions characterize critical thinking as the intentional application of rational, higher-order thinking skills, such as analysis, synthesis, problem recognition and problem solving, inference, and evaluation" (Angelo, 1995, p. 6). Perhaps the simplest definition is "Critical thinking... means making reasoned judgments" (Beyer, 1995, p. 8). Beyer views critical thinking as a disciplined manner of thought that a person uses to assess the validity of something. In the paper we use the definition developed by the AICPA (1999); Critical thinking encompasses the ability to link data, knowledge, and insight together from various disciplines to provide information for decision-making.

The foundation for understanding the development of critical thinking skills is based on Bloom's taxonomy of learning (Bloom, 1956) which originally consisted of six sequential levels: (1) knowledge, (2) comprehension, (3) application, (4) analysis, (5) synthesis, and (6) evaluation. Knowledge, comprehension and application were considered lower-order thinking skills, whereas application, analysis and synthesis were considered high-order thinking skills. Bloom recognized that critical thinking was composed of more than just cognitive activities and identified three components: a cognitive component, a behavioral (or psychomotor) component, and an affective component. Ennis (1987) describes that the critical thinking process using three main components: a critical thinking disposition; the use of Bloom's (1959) higher-order thinking skills; and strategic problem solving abilities. Huffman (2012) calls these three components the ABC domain: Affective; Behavioral; and Cognitive. She further identifies critical thinking components under each domain. These are presented below. Sound critical thinking that links data, knowledge, and insights together for proper decision-making occurs at the intersection of these three components.

Affective components are the emotional foundation that either enhances or limits an individual's ability to think critically. It determines the individual's ability to approach the problem with an open mind, to seek new information, and to accept alternative solutions rather than searching for evidence in support of a perceived belief. The following are specific components of the affective domain:

- *Tolerating ambiguity:* Critical thinkers are comfortable with qualifying their response because they recognize that many issues are complex and do not have a single "right" answer.
- *Recognizing personal biases:* Critical thinkers use their intellectual skills to recognize personal biases and self-deceptive reasoning and endeavor to reduce these biases and to mitigate their effects on personal decision-making.
- *Valuing truth above self-interest:* This implies holding oneself and others to high intellectual standards and to recognize that "truth" is always in one's self-interest.
- *Empathizing:* Critical thinkers value the thoughts, feelings, and actions of others and try to fully understand others so as to reduce egocentric judgments.
- *Welcoming divergent views:* Critical thinkers understand the importance of examining issues from many points of view and value positions that are contrary to their beliefs.

- *Accepting change:* The mindset of a critical thinker is open to the need for adjustment and adaptation, even for deeply held values and beliefs.

Behavioral components are the actions or strategies necessary for critical thinking. These are necessary for a proper understanding of the problem and for creating solutions. The following are specific components of the behavioral domain:

- *Listening actively:* When gathering opinions and information from others, critical thinkers fully engage their cognitive listening and thinking skills.
- *Encouraging critical dialogue:* In addition to active listening, critical thinkers encourage dialogue through active questioning.
- *Employing precise terms:* Critical thinkers engage in clear communication by using specific, clear, well-defined terms that are known to the individuals.
- *Gathering data from a variety of sources*: Critical thinkers actively seek relevant, timely information from a variety of reliable sources.
- *Distinguishing fact from opinion:* Critical thinkers evaluate information for its veracity.
- *Delaying judgment until adequate data are available*: Critical thinkers do not jump to hasty conclusions; instead, they patiently wait until sufficient, high-quality data is gathered.
- *Modifying judgments in light of new information:* Critical thinkers modify or abandon existing ideas when new evidence or experience contradicts former opinions.
- *Applying knowledge to new situations*: Critical thinkers can discern when information is applicable to a new situation and when it is irrelevant.

Cognitive components are the thought process actually involved in critical thinking. It involves using higher-order thinking skills to reach reasonable conclusions. The following are specific components of the cognitive domain:

- *Thinking independently:* Critical thinkers do not passively accept the opinions or beliefs of others and are not easily manipulated.
- *Defining problems accurately:* In order to address the problem properly, critical thinkers will accurately define the problem using precise terms for themselves and others to understand.
- *Analyzing data for value and content:* After gathering data and establishing its veracity, critical thinkers will carefully evaluate the data to determine its value in the decision. It involves being eclectic in gathering information, welcoming divergent views, analyzing the usefulness of information and using the best.
- *Employing a variety of thinking processes:* To resolve problems, critical thinkers will use a variety of logical reasoning tools (e.g., inductive, deductive, dialogical, dialectical).
- *Synthesizing:* After taking an "eclectic" approach, critical thinkers are able to combine various elements into a meaningful composite.
- *Resisting overgeneralization:* Critical thinkers know when to generalize by applying a fact or experience to a similar situation and when not to over-generalize to superficially similar situations.
- *Employing metacognition:* Critical thinkers will reflect on their own thinking and analyze their own mental processes so as to learn to be better thinkers and decision-makers.

TEACHING OTHERS AS A MEANS TO DEVELOP CRITICAL THINKING SKILLS

In order to understand the value of teaching for the development of critical thinking skills, a detailed description of the activities of teaching is useful. Danielson (2013) presents a framework for formal classroom education that specifies teaching activities at various stages of the education process. She identifies four areas: planning and preparation, classroom environment, instruction, and professional responsibility. Within each area, she identifies specific activities.

The following are Danielson's activities of teaching that are applicable to business students teaching others. These activities are described along with the primary critical thinking skills developed through each teaching activity and are summarized in Table 1.

Table 1: Critical Thinking Components Developed through Teaching Activities

	Teaching Activities						
	Preparation & Environment				**Instruction**		
Critical Thinking Components	Define problem	Consider audience & build rapport	Consider alternatives & select method	Organize & prepare materials	Deliver instruction	Assess progress & recognize deficiencies	Consider & present alternative instruction
Affective components							
Tolerating ambiguity			++				
Recognizing personal biases		++					
Valuing truth vs. self-interest			++				
Empathizing		++					
Welcoming divergent views		++					
Accepting change						++	++
Behavioral components							
Listening actively		++			++		
Encouraging critical dialogue		++			++		
Employing precise terms	++			++	++		
Gathering data			++				
Discerning fact from opinion			++				
Delaying judgment			++				
Modifying judgments						++	
Applying to new situations							
Cognitive components							
Thinking independently			++				++
Defining problems accurately	++						
Analyzing data			++				
Employing thinking processes			++				
Synthesizing				++			
Resisting overgeneralization				++			
Employing metacognition							

Key: ++ implies the teaching activity significantly develops the component of critical thinking.

The applicable teaching activities are:

- *Define the problem:* The problem to be addressed with instruction must be clearly defined using precise terms. This requires adequate understanding of content and a limitation of scope to relevant problem. Accurate defining of the problem is a critical cognitive component at this teaching stage.
- *Consider the audience and build rapport:* In order to develop appropriate materials and use appropriate pedagogy, instructors must know their audience. Moreover, there must be a relationship of respect and trust for a culture of learning to develop. This requires an understanding of one's personal biases. Likewise, empathy and welcoming divergent views are important affective components when developing rapport. Listening actively and encouraging critical dialogue are also necessary for a good understanding of the audience and their needs.
- *Consider alternative teaching methods and select the best teaching method:* Given that there are many pedagogical choices, the most appropriate teaching method must be selected to address the problem and the

needs of the audience. At this data gathering stage, the teacher must be able to tolerate ambiguity, delay judgement, and value truth over self-interest. Data must be gathered from a variety of sources and evaluated for its veracity and usefulness. Data analysis and the use of various thinking processes, coupled with independent thinking, are critical cognitive components necessary for the next stage of preparing instructional materials.

- *Organize instructional information and prepare instructional materials:* Development of teaching materials requires a thorough understanding of the material and how it relates to the teaching method and the audience needs. It requires the use of precise terms as well as develops the cognitive skills of synthesizing and appropriate generalization.
- *Deliver the instruction:* Once the materials and preparation are complete, instruction actually occurs. At this stage, the teacher must use precise terms, listen actively and encourage critical dialogue.
- *Assess learners' progress and recognize deficiencies:* As the learning process occurs, assessment of the learners' progress can reveal deficiencies in their learning. This requires the use of many of the affective and behavioral components, with particular emphasis on being willing to modify judgements.
- *Consider alternatives and present alternative instruction:* To ensure learning in the face of deficiencies, alternative instruction may be necessary. This requires openness to alternative methods, a willingness to try, and perseverance. A willingness to accept change and an independent mindset are important foundational components for this stage.
- *Exercise metacognitive skills throughout the process:* As the teacher progresses through each stage of teaching activities, independent thinking is a necessary component. Likewise, reflection on the successes and failures of the activity, metacognition, can be a valuable tool. Although reflection is not required for good teaching, it is useful for developing teaching skills. Teaching others provides an opportunity for students to learn metacognition skills that can be applied to other areas.

In addition to these teaching specific activities, business students teaching others have the following professional responsibilities:

- *Demonstrate professional behavior:* When working with a client, business students must act in a professional manner, such as dress, speak and interact appropriately.
- *Act ethically:* Business students must act ethically, particularly in the area of confidentiality.

The specific structure of the teaching activity can affect the value for critical thinking skills development. For maximum benefit, the learning opportunity must allow students to struggle to find their own responses in an environment that is meaningful and where there is the opportunity to work with a variety of people. Overly structured problems fail to provide students with the opportunity to deal with ambiguity. Research on active-learning in accounting education suggests that when students develop their own solutions to practice problems, they are more likely to retain the knowledge and skills developed (Springer and Borthick, 2007; Hermanson, 1994; Kimmel, 1995). Additionally, the best learning experiences are those where there is a close connection between the academic subject and the service work, where students are engaged in important, meaningful work, set within the larger community (Astin *et al*., 2000). Finally, the experience is richest when there is the opportunity to work with people from other backgrounds and when students reflect on their experience (Eyler and Giles, 1999).

THE PROJECT

Assignment

The project is a teaching experience where students in small groups investigate cash controls for a non-profit organization-- specifically Parent Teacher Organizations (PTO)-- and develop instructional written materials for use in teaching the organizations about proper cash controls. After preparing the written materials, the students meet with members of the organization and deliver a short presentation using their materials about internal controls over cash assets. The experience culminates with each student writing a 1-2 page reflection on the process of preparing and teaching cash controls.

Learning Objectives

The primary purpose of the assignment is for students to develop a deep understanding of risk and controls over cash and to develop critical thinking skills through the process of education others. The specific learning objectives include auditing content objectives, as well as AICPA Core Competency objectives (AICPA, 1999), many of which relate to developing critical thinking skills.

The auditing content objectives are:

- To develop skills in identifying and obtaining information from diverse sources.
- To reinforce internal control concepts, specifically controls over cash.
- To allow students to gain and apply skills relating to internal control processes.
- To integrate and synthesize risk and internal control concepts.
- To communicate results to a specific audience.

AICPA Broad Business Core Competency objectives are:

- To develop an understanding of small non-profit organizations.
- To understand legal issues surrounding embezzlement.
- To develop skills in managing client relationships.
- To anticipate client needs and develop plans to meet those needs.
- To develop critical thinking skills.
- To manage resources to accomplish the project (human resources).

AICPA Functional Core Competency objectives are:

- To identify appropriate means of communicating information.
- To develop skills in research.
- To use technology to develop written materials.
- To demonstrate an understanding of risk.

AICPA Personal Core Competency objectives are:

- To demonstrate strong written communication skills
- To practice interpersonal communication skills.
- To develop healthy group interaction skills.
- To develop problem solving skills.
- To practice professional demeanor.
- To develop project management skills.

Implementation Guidelines

This project has been assigned regularly in an undergraduate internal audit class over the past five years at a mid-to-large size public university with a fifteen-week semester and class sizes of thirty to forty students. Typical students are 50% male and 50% female, 90% traditional students, 85% live off-campus, and most are accounting majors in their senior year. This project is also suitable for undergraduate external audit classes and can be used at the graduate level.

Cooperative learning: Students are assigned by the instructor to groups of three or four at the beginning of the semester and work on a variety of exercises together. The groups are purposely heterogeneous to provide students with the experience of cooperating with individual different from themselves. In order for students to develop group dynamics skills, we do not interfere with groups except in rare situations. Research shows that heterogeneous groups produce a more effective learning environment than student self-selected groups as measured by individual academic performance (Smith and Spindleb, 2007). Moreover, some critical thinking learning objectives are better achieved with students working in diverse groups.

Unstructured assignment: Much of the benefit of this teaching project occurs because students must wrestle with uncertainty in an ambiguous environment. Therefore, it is important to keep the project as unstructured as possible so as to develop critical thinking skills. All too often, students are in the habit of probing instructors for the 'right' answer. This is to be avoided and the scope and scale should be open-ended so students have the opportunity to respond creatively to the assignment. Students are encouraged to seek outside help. The process of identifying a need and consulting with experts is an important skill development. It is our experience that they will produce teaching materials that far exceed expectations.

Project timing and due dates: Students are informed of the project early in the semester but it is not formally assigned until the eleventh week and is due two to three weeks later. A short-project window with no interim due dates is used to mimic time pressure commonly present in auditing work. This time horizon is not critical for most

learning objectives and can be extended. However, formalizing interim due dates for stages of the project reduces the ambiguity and the opportunity for students to develop project management skills.

Prior academic learning: Prior to assigning the projects, students learn about risk and risk management, internal control, fraud risks, cash handling and cash controls. We discuss the nature of small non-profit organizations to better equip students to understand and identify the economic and financial risks of these organizations. To add richness to classroom discussion of risk and ethical considerations, students report on examples of embezzlement in small non-profit organizations.

Professionalism: In class, we directly address professionalism because often this is the first opportunities student have to work in client-like setting, doing meaningful work. Students are encouraged to dress and act like professionals, to demonstrate confidentiality, efficiency and ethical behavior, and to deliver a high-quality professional product.

Metacognition: After students complete the project, they are asked to write a 1-2 page reflection paper about what they learned from the project, how they would approach the problem differently, what they learned about group dynamics and project management, what went well and what did not. This is an area where instructor comments are extremely valuable. Often students have limited exposure to metacognition activities in business education and few are able to truly do this well. To develop student reflection skills, we demonstrate the processes using personal reflections about the process of writing research papers. Metacognition is an important component of developing critical thinking skills and thus, this part of the project is vital to student development.

Instructor feedback: The written materials developed are graded as follows: 1/3 appearance, 1/3 content, 1/3 usability for education. Appearance is important and is judged on how interesting it is and how easy it is for the reader to use? Content is graded based on the auditing learning objectives. The final third is an assessment of how would this be received by others as a learning tool. Was the word selection appropriate for the audience? Was there enough content, but not too much? Would the reader learn from this document? The individual reflection papers are separately graded based on level of effort and thoughtfulness. No attempt is made to adjust grades for dysfunctional group members. Likewise, no assessment of successful education of the PTO was attempted.

Final caution: Prior to beginning the project, students are advised not to volunteer audit service to any organization. Because the cash controls of some small non-profit organization are weak and a significant potential exists of finding evidence of irregularities, students are specifically told not to look at the books. We prefer students to learn accounting and critical thinking skills and avoid involvement in civil and criminal cases.

Outcome Assessment

After completing the project, students provided feedback by completing a questionnaire, which included assignment-related questions, competency-related questions, as well as demographic questions. Questionnaires were distributed to on the second to last day of the term after the project was due; feedback did not become available to the professor until after the term was over and grades were submitted to the university. A 7-point Likert Scale was used where strongly disagree was represented by "1" and strongly agree was represented by "7". Neither agree nor disagree was represented by "4". Table 2 contains a summary of feedback from forty-three students who completed the project this past semester.

Overall, the project was favorably received and most students (91%) thought the project was a valuable learning experience which helped them understand business better and recommended the project be used in class again. Student response to the content learning objectives was also high with over 85% of the students responding that the projected helped them better understand the course content objectives. Student understanding of financial risk for non-profit organizations was rated most poorly of all the content area objectives (mean=5.72 with 9% of the respondents believing the project did not help their understanding).

Overall, the students rated the development of their critical thinking skills above 5.5 which is half-way between neutral (4.0) and strongly agree (7.0). The most highly rated critical thinking skills included: encourage critical dialogue, think independently, gather and evaluate information and be flexible and able to modify judgments. The lowest rated critical thinking skills were: distinguishing fact from opinion, tolerating ambiguity, and delaying judgment. Although active listening was rated overall with a 5.93 mean, a surprising twelve percent of the students did not think they used active listening in the project.

Table 2: Student Feedback on Learning Outcomes

	Percentage who			Mean*
	Agree	Neutral	Disagree	(n=43)
Overview				
1. I would encourage the instructor to use this project in class again.	91%	2%	7%	5.77
2. Overall, I found this project to be a valuable learning experience.	91%	7%	2%	6.05
3. Overall, I understand business better.	91%	7%	2%	5.84
Content knowledge				
This project helped me develop a better understanding of . . .				
4. the internal control process.	95%	2%	2%	6.00
5. the relationship between risk and internal control.	91%	7%	2%	6.02
6. cash controls.	98%	0%	2%	6.02
7. how organizations implement cash controls.	86%	9%	5%	5.88
8. financial risk for a nonprofit organization.	88%	2%	9%	5.72
Critical thinking skills				
In this project, I needed to . . .				
9. tolerate ambiguity.	65%	23%	12%	5.84
10. welcome divergent views.	77%	19%	5%	6.07
11. be accepting of change.	72%	19%	9%	5.88
In this project, I needed to . . .				
12. listen actively.	70%	19%	12%	5.93
13. encourage critical dialogue.	81%	19%	0%	6.42
14. gather information and evaluate its value.	86%	9%	5%	6.16
15. distinguish fact from opinion.	81%	9%	9%	5.65
16. delay judgement until adequate information is gathered.	81%	12%	7%	5.88
17. be flexible and be able to modify judgements from new information.	84%	12%	5%	6.16
18. apply knowledge to a new situation.	88%	7%	5%	5.95
In this project, I needed to . . .				
19. think independently.	79%	19%	2%	6.28
20. define problems accurately using precise terms.	93%	2%	5%	6.00
21. synthesize information from a variety of sources.	86%	14%	0%	6.02
22. reflect on my own learning process.	88%	7%	5%	5.93

*7-point response scale: 7=strongly agree, 4=neither agree nor disagree, 1=strongly disagree.

Business Education Application

Although this project was designed for an internal auditing class, the concept of having students teach others can be applied in other business classes. Non-profit organizations, especially small ones, are rich with needs and could benefit from education in a variety of business areas because often they are managed by untrained volunteers. Marketing students, for example, could teach organizations about marketing strategy, customer awareness, sales, advertising, etc. The customer-base for non-profit organizations includes both people using the services and those supporting the charity. Non-profit organizations need to know how to develop a brand image and to advertise to both these groups. Alternatively, finance students could help educate non-profit organizations on proper budgeting techniques. Resources management is critical for many cash-starved organizations. These are two obvious examples, but many others exist.

Besides non-profit organizations, individuals can benefit from direct business education. In accounting, the VITA (Voluntary Income Tax Assistance) program can be an opportunity for students to teach others how to prepare their

own taxes. Although usually this service for the community is not part of academic coursework and may not focus on teaching (enabling) others how to prepare their own taxes, it could be developed as an educational tool. Likewise, teaching financial literacy is opportunity for finance students to educate others. The National Endowment for Financial Education has Financial Workshop Kits that provide tools and resources that allow students to share financial education to their local community.

In this paper, we advocate for these educational experiences to be incorporated into direct classroom activities. Alternatively, some of these educational service projects could also be undertaken by business student organizations. Likely, the value to the student would be less because of the lack of reflection and instructor feedback. However, both are worth considering.

CONCLUSION

Teaching others is a valuable learning tool, which develops the skills necessary to link data, knowledge, and insight together for meaningful decision-making. It is an alternative to traditional education, service-learning, and peer teaching which focuses on student-to-student education. If done right, students can more deeply develop affective, behavior, and cognitive critical thinking skills. The challenge for academics is to identify and implement directed learning activities where students reach out and teach the community some skills they are learning in the classroom. The benefits to both student and society can be great.

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Preparing your sales course for Generation Z

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ABSTRACT

Generation Z, also known as Gen Z, are individuals born in the mid-1990s to 2010. They represent the newest group of college students and soon to be sales professionals (Schawbel 2016). This group is unique in how they have developed and in turn, how live their lives. They learn, communicate, and express themselves in very different manners compared to other generational groups. Unlike other generations, they seem to be an extremely entrepreneurial generation, driven by practicality and financial success (Zimmer 2015). Because they have become accustomed to simultaneous receipt of information from multiple sources, developing Gen Z's into sales professionals will require a variety of well-structured pedagogical methods and designed training processes.

Sales careers and other related occupations is expected to grow approximately 5% by 2024 (Bureau of Labor Statistics, 2015). GrowthPlay, a known researcher and developer of sales education, believes it is vital to focus on the upcoming generations (GrowthPlay 2015). It is essential that we realize that there is untapped energy and talent within these future sales professionals.

Keywords: Generation Z, Pedagogy, Professional Sales Education, Learning Theory

INTRODUCTION

According to Cespedes and Weinfurter, studies indicate that approximately $900 billion is being spent on salesforces annually. This represents a significant portion of expenses associated with a typical firm's marketing strategy execution (Cespedes and Weinfurter, 2016). Moreover, in the United States it is estimated that organizations spend "$20 billion annually (by conservative estimates) to train salespeople on products, selling skills, and territory management" (Zoltners, Sinha, and Lorimer, 2016 p.2). Sales education and training requires an understanding and ability to apply psychological, sociological, behavioral, economic, and communication principles. Students' sales training must lead them through the organizational buying process. If we are to develop Gen Z into sales professionals, we have to grasp the values, learning styles, and expectations expressed by this group. Therefore, we must be willing to modify sales instruction but align our strategies with expected outcomes in the marketplace.

A collegiate sales course is ideal to introduce the Generation Z student to the sales profession and develop selling techniques that will enable them to communicate and build relationships with business clientele. Effective sales people can be developed using very specific training methods that provide students with the opportunity to realize their potential skill set and gain confidence in their selling abilities. Utilizing various learning constructs like Metacognition, Scaffolding-Spaced learning, Project Based learning, and Constructivist learning theory allows the professional selling instructor to connect and develop sound pedagogy. It requires a systematic approach that creates a balance between purpose-built learning experiences and the challenge of sales production (GrowthPlay, 2015).

Generation Z Defined

There is a unique opportunity to develop the future salesforce and marketing professionals from this group. They have a much more global perspective that allows them to approach sales in a more culturally adept manner. Gen Z has the ability to develop sales contacts and build client relationships through a broader perspective (Jenkins, 2015). Throughout their lifetimes, Gen Z has been able to witness critical cultural change by means of considerable prosperity generated through technology, social connectedness, and newly emerging revenue streams. They are aware, involved, and value driven individuals.

Who is Generation Z? These individuals have been the most informed and influenced population within our society. They are fast-paced individuals, constantly identifying ways to express individuality in a more socially conscious world. They possess the ability to absorb information quickly and create quick evaluation of value. Much of their learning and communication skills are developed through constant technological bombardment and high-tech interactions with their peers and other people (Turner, 2015).

Generation Z measures success through the positive impact that is made on other people and improvement of life overall. Because Gen Z is inherently entrepreneurial, they are willing to take on risk for potential reward. Due to this trait, they are a generation that can create direct impact on their clientele by offering authentic and unique solutions.

The profession of sales offers the variety and freedom sought by this generation, while providing the structure and mentorship they desire. In addition, a good portion of Gen Z desires to take on leadership roles within an organization if viewed as valuable. They are a hard-working generation that is willing to put forth the effort needed to generate beneficial value for them and the world around them. (Robert Half, 2015).

This group naturally strives for personal connections. They want to participate and not be observers. Organizations are rewarded with Gen Z's loyalty and devotion when included as a potential participant. They recognize those organizations and develop relationships built through proven trust. Generation Z wants to see how their own beliefs and goals are being reinforced before buy-in takes place. In sales, they are motivated to be stakeholders and investors in the process not simply facilitators. According to Mary Lou Addor, "the level of stakeholder involvement increases when the goal of the project is information exchange; it increases further still when the purpose of the project is to provide recommendations and again when the outcome is agreement" (Addor, 2013 pg. 3). They thrive on collaboration and desire to provide their insight during strategic decision-making and planning processes.

These individuals have a desire to be taught through customized approaches and demand immediate access to authority figures in order to obtain feedback. They feel the need to differentiate themselves and have made major strides by seeking mentorship and guidance. Typically, they do respond well to individual evaluation but yet seek improvement to discover the best ways to be successful (Tulgan, 2013). Training techniques are crucial. To engage these overly digital natives, we need to create educational programming directed towards interactive experiences. Teaching strategies need to include small-group activities, games, and simulations. It is also essential to create group integrations that include functions of networking, peer-to-peer coaching, and collaborating with other people (GrowthPlay, 2015). Because Generation Z requires genuineness, they prefer to communicate through face-to-face conversations in business settings. They have the ability to develop keen listening skills will allow them to be in a better position to create unique solutions based on facts (Carson, 2015). Generation Z has the potential to become an impactful salesforce of the future due to their ability to learn new information quickly , present value driven solutions, and create an array of successful relationships during the process.

In order to create a workable teaching structure, instructors must recognize the importance of the above factors to influence Generation Z. Applying a variety of learning theories becomes necessary when developing specific pedagogy that develops the art and skill of professional selling. The following theories address first the underlying influences behind the adjusted training towards Gen Z followed by the most impactful practices used to address the teaching techniques desired by this generation.

Learning Theories Applied to Generation Z

Metacognition

This evidence-based learning theory identifies a procedural method that takes the student through a self-revelation of what they know and how well they know it. Ibabe and Jauregizar (2010) suggest that Metacognition directs the instructor to create a managed environment where they oversee activities that require students to behave in a certain manner in specific structured situations. It allows the students to assess their thoughts and actions throughout an educational program. Teaching procedures involve a variety of activities that require the student to model self-taught solutions and assessments. During the process, the goal is to have students continually develop new thoughts and measure how well they perform (Dunn et al., 2013).

The student participates in both formative assessments during the process and concludes with summative assessments at the conclusion of the educational experience(s). These assessments measure what the student should learn, what they have learned because of the educational experience, and provides an opportunity for the instructor to change or improve the pedagogical approach.

Scaffolding Spaced Learning

Spaced learning identifies that information is presented, repeated, and then after a time, repeated again to ensure retention and application. However, this strategy requires modification when delivering effective selling training. Within the selling environment, only a certain portion of information needs to be learned in a systematic manner. Competencies like prospecting and designed selling processes require systematic approaches. In this sense, spaced learning is appropriate while directing students through short practice sessions that enable them to have better memory and longer retention of these competencies (Dunn et al., 2013).

In addition, Scaffolding learning is a theory that provides opportunities for learners to engage in activities beyond their initial abilities. Each learner begins the learning process at various capability levels. Once a baseline is established, course design allows students to develop independently by creating reflective thinking and learning

skills (Jackson et al., 1998). Procedures will then change over time to reflect the acquisition of one skill and the advancement towards a more advanced level of that skill.

By combining these two learning theories, the instructor develops a series of planned activities intended to continually build competencies throughout a specific course. The series of activities are meant to reveal the students' capabilities in the beginning of the course and transition them through a projected elevation of skill-building processes. In essence, instructors are creating building blocks with a desired course-ending outcome. These building blocks rely on the achievement of a prior competency but continue to propel the student towards the same ending result.

Project Based Learning Theory

Though the origins of Project Based Learning are in the medical field, it has since been applied to many disciplines. The common issue to be solved through Project Based Learning is overcoming the concern that students do not remember what they have been previously taught, resulting in the inability to use the proper reasoning for future decisions (Hmelo-Silver et al., 2015). To overcome this issue, curriculum would be developed using student design, problem solving, and decision-making. More specifically, learning is achieved through a set of activities designed to test the ability of the student to work through particular organizational problems connected to trial-and-error processes.

All forms of instruction are built on the concept that people learn better from real-life or simulated real-life experiences. Being usually theme based or time based, these methods utilize the group setting. One variation of Project Based Learning is identified as Actor-Centered Learning. To develop this method of learning, actors are individuals that act because of views and perceptions of someone within an organization (Poell et al., 2009). In particular, this concept can be applied to the buyer or seller roles within sales education.

Constructivist Learning Theory

Within constructivist instruction, the student is directed through a series of experiences that drive them to develop or "construct" potential solutions. This theory of learning suggests that the student develops knowledge through the continuous testing of ideas as a result of experiences and cultural applications (Ertmer and Newby, 1993). Course time is used to develop structured activities and interactions where students then are required to provide their authentic solutions.

A lecture or led discussion provides background for students. The students may also use their past experiences as information to generate a new solution. Fictitious problems are presented as part of simulated real-world situations (Dewey, 1916). The student in turn learns to sift through a variety of pieces of information including sociological, psychological, and modeled solutions in order to arrive at an optimal solution. The end goal is to have the student to create an objective outcome where the situational information is directly applied to a possible solution. In the case of sales instruction, a fictional role-play involving the buyer and seller would result in the outcome of closing or making the sale.

Development of Course Teaching Methods

The question that remains is how to adjust the selling learning theories to the changing Generation Z population. Within every sales course, there is an inherent need to develop the interpersonal skills of the prospective salesperson. However, emphasis needs to be placed on the discovery process used to generate problem solutions for the intended customer. Overall, Generation Z is likely to be more concerned with the person selling the products than the price or quality of the products (Stevens and Kinni, 2007). However, this is not always the case for the buyers themselves. Within a particular purchase situation, buyers are motivated by many forces including corporate needs, personal needs (physical, psychological, and economic), as well as sociocultural influences. They are looking for a consultant that will be able to listen, consult, collaborate, and in the end create a solution. Adaptation of the seller is vital and becomes one of the most significant skills to be taught. Other important elements to a salesperson's success include being intuitive, communicating well, and delivering both short-term and long-term solutions.

Course development is the key to developing a sales engineer or a person that can be a technician and expert for their product. In the past, much of our professional sales pedagogy has been directed towards listening, developing a sound presentation, and concluding with an agreement. Limited attention has been dedicated towards innovative solution creation. There has been a shift in what is expected in the future sales problem-solvers. They are not simply facilitators between buyer and product but now they have to become formative professionals that create unique solutions. Organizations want to do business with salespeople who can deliver original solutions. They have to be

able to address future strategic goals and open new opportunities for growth. It becomes imperative that the Generation Z sales students become visionary solution generators (Stevens and Kinni, 2007).

The selling course now needs to address the changing needs of the customer, as well as harness the character of the Gen Z salesperson. Changes in the character of this newly arriving student have been noticed. They no longer approach education or coursework in the same manner. Unlike other generational learners, this group of students does not necessarily need to be spoon-fed but rather seeks to obtain sales training through slightly modified instructive methods involving feedback and growth opportunities.

The course structure is vital. Utilizing a variety of learning theories, the sales course now allows for the guidance that Generation Z seeks. Specifically, metacognition creates exercises where the student learns to adapt and modify their behavior during the selling process. They will be able to try out their methodology, receive feedback, and finally develop the proper thought and behavioral processes needed to arrive at an optimal outcome. Scaffolding-spaced learning, as well as project based learning generates a systematic approach used to reveal a student's capabilities to close a sales encounter. Typically, selling scenarios are utilized throughout sales training to derive effective communication and problem solving. They tend to measure the entire selling process.

In a new approach, selling scenarios are performed in a shorter but repetitive manner. Each scenario should have a specific sales technique attached to the selling scenario. As scenarios progress throughout the semester, higher level objectives and techniques should be derived. In the beginning of the semester, the selling scenario ought to be directed towards building rapport, then progressing through a series of scenarios related to buyer identification, call objectives, developing sales approaches, ethics, communication questioning, listening, need/motive discovery, intuitive solution creation, sales presentation, addressing objections, trial closing, obtaining commitment and follow-up. These scenarios should build on each other, repeating the earlier topic, reinforcing it, then progressing into the next topic. As a rule of thumb, the time necessary for scenarios grows as the semester progresses through either more frequency or lengthened sales presentation time.

Secondarily, the newly developed scenarios involve students on both sides of the desk; one as a seller, the other as a buyer. Students are responsible for preparing each of their sides of the scenario. Students are provided guidelines and objectives to be achieved prior to the actual scenario performance. Each scenario should be different and unique to a particular situation and buying circumstance. This may also include an interruption and continuance of a particular selling scenario generating a simulated breaking point in the sales call. This process allows the instructor to become an observer, providing immediate feedback related to the key selling objective, communication skill development, and selling effectiveness. In addition, each student provides peer-to-peer evaluation. After every scenario, students are required to submit a written evaluation related to their peer's preparedness, their displayed personalities, well-performed aspects, and areas of improvement needed.

Constructivist learning needs to be applied to the overall course development,. Each scenario, case, and assignment needs to have realistic customer problems intended to have realistic solutions. One has to consider that there can be a range of possible solutions. The construct of the activities needs to allow the student to have the freedom to offer a different solution within a provided framework. They need to be able to progress through the need discovery process but engineer a solid customer solution. For example, class discussions may address the need to create innovative purchase solutions to a common organizational problem like document storage and disposal. In the attached Dispose-a-problem Document Shredding scenario, a student has to perform a situation analysis, utilize questioning to reveal the customer needs and concerns, and engineer an innovative solution for the prospective sales client. Depending on how the buyer proceeds through the scenario, the student has the opportunity to generate a unique solution.

Each semester represents an overall project that culminates with a concluding demonstration of the student's ability to effectively progress throughout the complete selling process. As confidence in each selling skill increases, a final evaluation is put in place as a measurement of selling excellence. A formal final examination divided in four parts may be used. Each student is given four timed essay sections related to a particular selling scenario. The selling scenario requires no previous information. The essay exam requires the student build their selling proposition and identify the various intended selling methods throughout each of the rounds. This helps evaluate their methodology and prepare for a final selling scenario. Students have developed selling competencies through previous selling scenarios, building their abilities a piece at a time. In the end, the student now has to work through an entire selling situation beginning with establishing the sales appointment to creation of follow-up after the sales call. A final scenario is then created where the instructor takes on the role of the buyer, recording the interaction. The student is provided with the particular selling scenario requiring individual preparation and delivery. Each situation may have

the same selling objectives, however, the buying dynamics and situation varies slightly therefore resulting in unique presentations and solutions.

DISCUSSION

Sensing the changes in the student population, it has become essential to research this newest generation of student, test the different instructional theories, and develop a measurable and systematic approach in the Personal Selling course. If the goal is to prepare the student for the real business world, then measureable tactics have to be implemented in order to address the differing characteristics of Generation Z. Over the past two years, I have made progressive developmental changes in the Personal Selling course. Not every student entering this course possesses the desire to become a sales professional. The course attracts students from multiple disciplines within the university so we have to approach the development of student capabilities in a very adaptive and systematic manner.

After making modifications in course delivery, students have expressed a greater appreciation for the selling technique and developed stronger selling ability. They have come to realize that these skills are universal and able to be applied in a variety of situations. The measurement of success is two-fold. First, standardized semester-end evaluations have been conducted to both quantify and qualify the effectiveness of teaching/learning. Statistically, over the last two years, students have indicated that the modified course delivery tools were more satisfactory and valuable. Kent State University utilizes a standardized Student Evaluation of Instruction to determine the course effectiveness. These evaluations are a measurement of anonymous student perceptions about the course. In a course like Personal Selling, student perceptions are valuable in deciding how to plot and identify expected changes in their selling capabilities.

In particular, a question is asked related to student perceived evaluation practices. Table 1 demonstrates the changed perception over the last two years of evaluation.

Table 1: The assignments and tests allowed me to demonstrate what I learned

	No. of Respondents	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
AY 2015-2016	26	73%	27%	0%	0%	0%
AY 2014 -2015	37	44%	41%	10%	5%	0%

The overall change in student satisfaction has been significant. This measurement provides validation of the success of directed pedagogy within the Personal Selling course. In addition, students have registered comments that have included statements like “Best, most valuable class I have taken at Kent; I found my niche.” In addition, one particular non-Marketing major stated, “Really enjoyed the format of the final exam and the selling scenarios - Made it easy to demonstrate one’s knowledge and preparedness.”

Students have rated their learning experience highly due of the applied teaching methods. The course design directly correlates to the desired needs of the Generation Z student, as well as the addressing the desired performance levels needed by prospective employers. Many of these students whether marketing or other majors, will find themselves beginning their careers in a sales-related field and will need possess these skills to ensure their success.

CONCLUSION

Teaching in an applied area like sales and marketing requires the instructor to evaluate student learning, teaching methodology, and the needs of industry. We are at the brink of Generation Z entering into the workforce. In a recent article by Frank V. Cespedes and Daniel Weinfurter (2016), they argue that more universities should be teaching sales because the market continues to evolve and is requiring more students to understand relevant selling techniques. Whether in sales or another area of organization, communication with the customer is often inevitable. The prowess of future business professionals is key to linking academia to the needs of industry.

Successful sales training is the result of the application of the correct pedagogy method within a course. Successive activities, simulations, and quality feedback are necessary to develop future salesperson. By applying key learning theories, we are able to generate successful teaching and training techniques for Generation Z. They will find these techniques to be beneficial and likely to propel them into successful sales futures.

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Appendix
Sample of Instructor Designed Role Play with Intended Outcomes

Dispose-a-problem Document Shredding (Seller)

You are a representative for Dispose-a-problem Document Shredding Services. Your sales manager has provided you with a lead for the local university. They have posted a bid related to document shredding and destruction. You aren't necessarily familiar with how the university system operates, but you can envision how much paper a university goes through. Secondly, there is an inherent difficulty with larger organizations because documents spread throughout a variety of buildings, so you will need to consider what options you have to centralize those papers.

Since this is a bid situation, you know that there will be several possible competitors. There are many document shredding companies that claim how secure their process is when it comes to document destruction, but you feel that you are one of the most respectable organizations and have a solid name to prove it. Two basic methods of

document destruction exist: 1.) Pick up the documents in designated document containers and take them back to your centralized document shredding facility or 2). Take a specially outfitted shredding truck to the place of business and shred documents on location. There are advantages to both solutions but the bottom line is that you need to offer the method that best fits the customer needs and willingness to pay for the services.

Pricing is comprised of several aspects:

1. **Hours needed for destruction or tonnage of documents being shredded**
2. **Frequency of document removal and destruction**
3. **Method of removal and destruction: On-premise or Off premise**
4. **Other services that are available for bundling.**

OBJECTIVE: Understand the bidding process and secure your position as the leading choice for document shredding. It is your responsibility to understand the buyer's need and respond to those needs with a solid comprehensive solution. Be sure that you are at least one of the final options among the various competitive choices.

Dispose-a-problem Document Shredding (Buyer)

You are the business manager for the local university. Since the privacy policies for the university now require a great deal of diligence and caution relating to student information, you have sent out a purchasing bid for a document shredding service. You realize there is a great deal of printed material that contains sensitive information in the university, including student records. Although the university has a plan to direct more things onto the web, you are certain that the campus will never be completely paperless. Document shredding seems to be a no-brainer and you are hoping that it does not cost much. There seems to be many companies out there and they all seem to look alike.

Many of the companies not only offer shredding services but also document storage. The document storage element would require you to convince campus administration to consider the additional service since it is not part of your original bid listing. Since administrators are always complaining that there is never enough room on the campus for classrooms or offices, this might be a way to free up space. An overshadowing issue remains with creating buy-in from faculty and staff to dispose of these sensitive documents securely. Generally, they do not like change, so convenience and security will be crucial to sell them on the process.

A representative from Dispose-a-problem Document Shredding is coming in to see you today. You need to gather the information about possible document shredding services quickly. You have been asked to bring a proposal to the campus business meeting at the beginning of next month. Instructions were to make the best choice and present that choice to the administrative committee. This is a priority and needs to be in place by next semester.

OBJECTIVE: As the Buyer, you need to know how to best approach the document destruction problem, how much it will cost, and how long it will take to get up and running.

Disclaimer: The information contained in this scenario is not necessarily factual. Specific details described were developed for educational purposes by Professor Don Thacker at Kent State University. This scenario is intended for the completion of the Personal Selling course at the Kent State University Stark Campus. While some organizations may resemble actual companies, the profiles and situations are purely fictitious and any comments or remarks made in this document or by participants of the selling scenario do not reflect the views, opinions, or facts of any actual organization.

Teaching an Inverted "Ricardian" Argument to Help Students Solve Comparative Advantage Problems

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Steve Smith, Truman State University, MO

ABSTRACT

The concept of opportunity cost is introduced in international economics (IE) as a nation's tradeoff between producing one good versus another in the "Ricardian" model, where students come to understand an economy as varying along the input of labor only. As simple as it sounds however, the idea turns out to be one of the most difficult concepts business students face. After being taught the simple "Ricardian" argument (i.e., labor as the only variable), students are taught the more "modern" theories of international trade where countries are modeled as "endowed" with varying degrees of land, capital, and labor (in terms of skilled or unskilled laborers), that require more elaborate arguments of trade under such conditions. But, without a solid foundation in Ricardo's "comparative advantage," students face tough challenges in any IE course. We offer a simple way of helping students makes sense of these basic IE concepts.

Keywords: opportunity cost, comparative advantage, international economics

INTRODUCTION

It is well known that the most challenging courses required of business students are the quantitative ones, and, traditionally, these are in four subject areas; statistics, economics, finance, and P/OM. For programs that may offer an economics concentration or minor as part of the business administration major, that normally means students are required to take one of the more challenging of the undergraduate economics courses, international economics (IE). It is difficult because the better part of any IE course involves understanding rather complex quantitative arguments about the benefits of trade between nations that at minimum require knowledge of spatial relations along with analytic geometry, and, even, differential calculus. Invariably, the most challenging concepts for students begin with David Ricardo's concept of comparative advantage that constitutes the first rationale for trade. More than that however, comparative advantage involves a counter-intuitive concept as students see it, because even though a country may be better at producing all goods, it is still better for that country to trade with another. That is, despite the evidence, most students continue to wonder: "why should I trade with someone else when I am better at producing everything?" As if that were not enough, we argue, understanding comparative advantage troubles even more students as the concept of opportunity cost is introduced as the justification for determining what product to export (i.e., what product to specialize in) and what product to import in a two country, two product scenario. Thereafter, having established opportunity cost and comparative advantage, textbook authors move on to derive from these foundational ideas the "modern" theories of trade that, truly, should require a foundation in calculus to fully appreciate the models (Gerber, 2014). However, since calculus-based economics courses are not the norm in most undergraduate business programs, instructors are left with the hard task of leading students through some rather challenging material.

CHALLENGES STUDENTS EXPERIENCE IN INTERNATION ECONOMICS

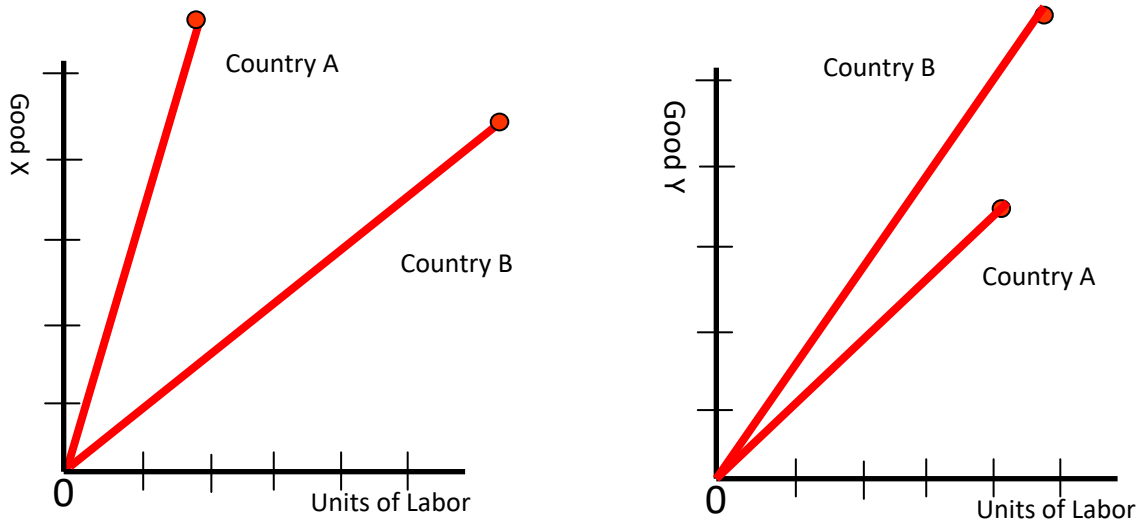
We argue students face challenges from problems inherent in the curriculum and problems in the subject of IE itself. Specifically, international economics is normally taught as an upper level course, thus students may be a semester if not a year or two away from having fulfilled their GENED mathematics requirements—a requirement the average student may have grudgingly completed with limited understanding. In our view, this level of mathematical "rustiness" is compounded by the fact that the concept of opportunity cost is really a counter-intuitive idea (to the mathematical modeling they learned) that basically says, each additional unit of good X produced "costs" a country χ units of another good Y that is not produced, in this case "forfeited." We argue this idea in and of itself is a hard concept to conjure, never mind comprehending it graphically. More to the point, whereas the average business student is taught productivity (and many other variables) as positive functions dependent on units of labor (or some other variable), opportunity cost sees production of one more unit of a good as the forfeited amount of production of another good. Thus, in order to understand, students face a "twisted logic" where productivity is a negative

function—greater productivity of one good, "costs" a relative reduction in production in another. We propose a way of leading students through a sequence of graphical exercises that should be more helpful in understanding and solving comparative advantage problems.

RE-CONCEPTUALIZING THE FUNDAMENTALS IN INTERNATION ECONOMICS

To start with, we establish that the comparative advantage of country A over B can be easily visualized by plotting production of some good as a function of units of labor as shown in Figure 1. On a per unit basis, students see it is the slope of the production line that defines the advantage for a given country. Thus, students can clearly see why country A would want to focus production on good X (figure 1a), while country B may have an advantage in the production of some good Y (figure 1b). In plotting this relationship the instructor can easily lead students to not only see the incremental benefits of production, but also to conclude that country A (or B, depending on the good) should expend more and more units of labor into "infinity" (obviously, a fallacy) to gain more and more benefits. In doing so, students are "primed" to have to re-conceptualize the "advantage" they now easily understand.

Figure 1. Absolute Advantage between Countries



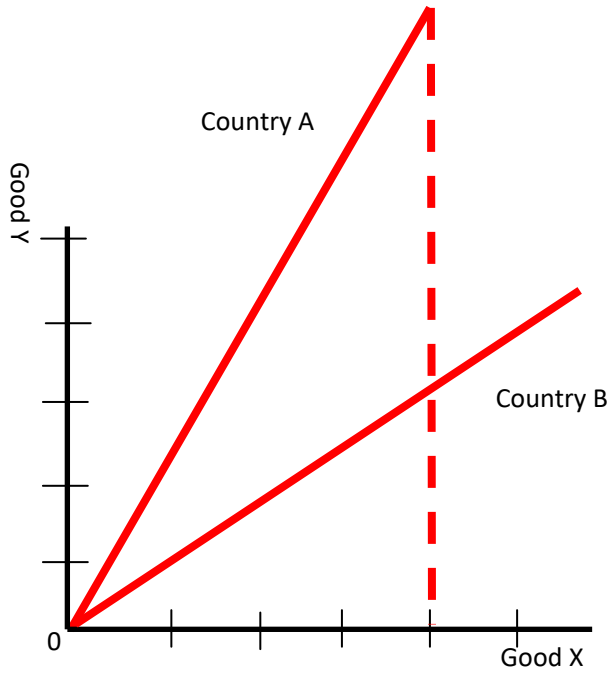
Moreover, by discussing the differences in the gain in expending the next unit of labor, students can easily come to understand the need/desire (through the differences in slopes) for country A to specialize in good X and trade for good Y, or *vice versa* when speaking of country B. With these simple curves modeling trade under Ricardo's assumptions, namely, that production knowledge and technology are constant, (hence the constant slope) the instructor can easily lead students to consider what the effects of improvements/innovations introduced by labor or the application of technology (i.e., relaxing Ricardo's assumption) might have on the curves. Students should conclude that improvements in production translate to more units produced per man-hour, thus, they should come to realize that the slopes must become steeper as more and more is "learned" and applied and technology is improved over time. As the instructor details such improvements, say, in the production of wheat, students should see that the path traced by the "advantage" curve becomes more and more "curved." Indeed, Wheat is a perfect example where production yield could be improved by first, better knowledge of soil and water management prior to and during planting, use of more effective fertilizers and pesticides, and better, bigger, more effective machinery at harvest time. In this example, students easily see that as each improvement is introduced yield must be higher over time. These effects on the curves in making production more "real" are important points for students to understand for the discussion of the "modern" theories that are part of any IE course.

The second, more important point of visualizing production this way, is that the same arguments made for a curve, say, units output of Y/units of labor, can be couched as units output of Y/units output of X (see figure 2). The students can easily follow the same logic as the advantage still holds. There is the risk however that particularly facile students will see through the absurdity of such a plot, but at this point the instructor can ask; 'what are we saying with this plot'? Obviously, that increasing production of X results in increasing production of Y, again, "*ad*

infinitum." Most students should be able to conclude that such a situation is nonsensical and impossible given that resources (i.e., land, labor, capital) are finite.

Having established that conceiving absolute advantage this way, while useful, leads to a conundrum, the instructor can demonstrate that the solution is a simple transformation of the curves, say the line $\mathbf{F}(\chi)$ is converted to $\mathbf{G}(\chi) = -1/\mathbf{F}(\chi)$. That is to say, with this transformation the advantage is still discernible but now the better country's advantage lies in the curve with the smallest slope (see figure 3). Most importantly, the curves now make more sense and the instructor can now easily launch into a discussion of opportunity cost.

Figure 2. Absolute Advantage of country A over country B in Terms of Y/X



SOLVING COMNPARATIVE ADVANTAGE PROBLEMS WITH POSITIVE SLOPED CURVES

The traditional comparative advantage problem can be simplified to its essentials as; 'who has a comparative advantage in some good X'? Alternatively, the question can be**:** 'what country should specialize in producing good X'? Or, more generally, the question can be asked; 'what should each country specialize in and what should they import'? No matter the wording, the fundamental problem in turn can be reframed to take advantage of positive functions by asking; 'does country A have an advantage over country B in producing good Y over good X'?

Having established that the slope is what determines the extent of the advantage using production functions, the solution to the problem is simply verifying if some country's slope is bigger than some other country's slope. The following example demonstrates this logic.

Table 1. The Typical Ricardian Problem

Country	Cloth	Wine
England	3	2
Portugal	3	3

Figure 3. Comparative Advantage of England over Portugal in the Production of Cloth

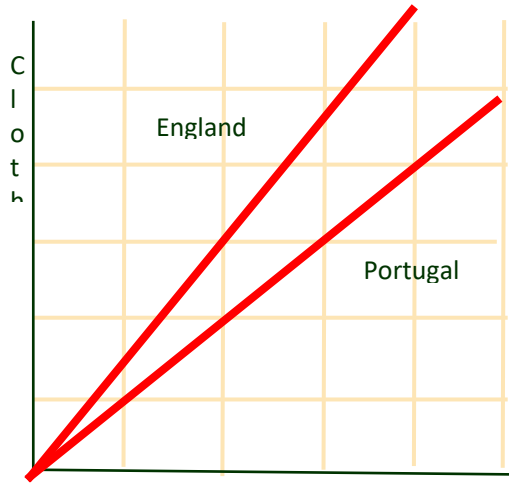


Figure 3a

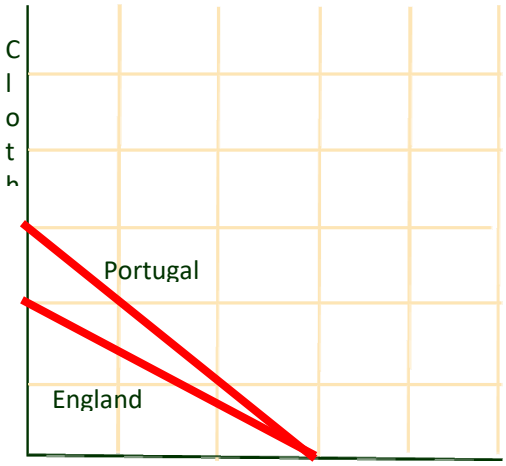


Figure 3b

In the example above, any question that references 'opportunity cost' can be reframed to ask; 'does England have an advantage over Portugal in producing Cloth over Wine?' In which case the answer would be obtained by testing if England's slope is bigger than Portugal's in terms of Cloth/Wine. In this case the answer is, 3/2 > 3/3, which is true; England does have an advantage over Portugal producing Cloth versus producing Wine. It is easy to ascertain that if the countries were reversed in the question above, the answer to the question would in this case be 'no' since 3/3 < 3/2. This illustrates the fact that fundamentally we are testing the veracity of an inequality stated as: is $C_E/W_E > C_P/W_P$ true? The reader should note that this example was carefully chosen so that both (opportunity cost) lines would emanate from the same production of X, thus making it easier to make the point that comparative advantage is essentially taking a graphical representation of the answer above (see figure 3a) and rotating it ninety degrees to the left about some point in the middle of the graph. The result would be as shown in Figure 3b, where the graphic now shows comparative advantage in terms of opportunity cost and the curves are termed the Production Possibility Frontiers (PPFs).

CLASSROOM ASSESSMENT APPLYING NOVEL APPROACH

As likely happens for any innovation in the classroom, approaches are discovered as an alternative to a lesson that students may be having trouble understanding, or perhaps may not understand at all, prompting the instructor to rethink concepts. This was the case in a section of the IE course taught to seniors at UAPB. Students struggled mightily to understand comparative advantage as presented in the textbook. It became obvious that the trouble was in the graphical argumentation for trade in the basic two-country two-good model. In an effort to improve understanding, the approach above was introduced to the students in the next meeting of the class, with 100% comprehension on a two-problem comparative advantage quiz. The following semester the approach above was introduced prior to introducing the traditional approach presented in the book, again with 100% comprehension on a two-problem comparative advantage quiz.

CONCLUSION

As pointed out earlier, the foregoing discussion required the specific example of production of one good be the same for both countries, thus leading to a clearer graphical explanation (as in figure 3). But comparative advantage normally includes two additional cases; a) countries with an absolute advantage in respective goods, and, b) one country with an absolute advantage in both goods—neither of which impacts our logic, but leads to messy graphs that are harder to explain. Thus, the caveat to the instructor is to choose his/her examples carefully, especially since we often device these extemporaneously in the midst of a lecture, often prompted by a student question.
Lastly, while there remain many more trials of our approach to confirm the soundness of our logic, the trials so far are encouraging. More importantly, the discussion of comparative advantage using these graphs, actually led

students to understand better the arguments of "modern" trade theory, overcoming the student limitations discussed in notes 1 and 2.

Bibliography

Gerber, J. (2014). *International Economics*, 6th edition. Pearson: Upper Saddle River, N.J.

Manuscript Guidelines, Submission and Review Process

TOPIC AREAS (BUT NOT LIMITED TO THESE):

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

SUBMISSION AND REVIEW PROCESS:

Copyright

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

Prepare your manuscript

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

Submit your manuscript

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

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

If your paper is accepted

- Minor revision suggestions will be transmitted back to you.
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- Cancellation cannot occur after the paper has been formatted into the final printer's file.

Manuscript Style Guide and Example

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

General Setup:

- All fonts other than exceptions noted below: Times New Roman. 10 point for text. Other sizes as noted below
- Margins: 1 inch on all sides of 8½x11 inch paper size.
- No headers or footers.
- Absolutely no footnotes or endnotes via footnote or endnote formatting. For footnotes or endnotes, place a number of the footnote in the proper location as a superscript. Then at the end of the paper or bottom of the page, add the footnote as text with a superscript number to correspond to that footnote.
- Page numbering bottom centered.
- No section breaks in the paper.
- No color, including url's. Format to black. No color in tables or figures. Use shading if necessary.
- All pages must be portrait orientation. Tables and figures in landscape orientations should be reformatted into portrait orientation.
- All paragraphs should be justified left and right, single spaced, in 10 point Times font, no indent on first line, l line between each heading and paragraph.
- One line between each paragraph.

Titles, Authors, and Headings:

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

Tables, Figures and Graphs:

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

References:

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

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

Evidence to Support Sloppy Writing Leads to Sloppy Thinking[1]

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

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

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

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

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

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

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

PREVIOUS RESEARCH

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

RESEARCH DESIGN

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

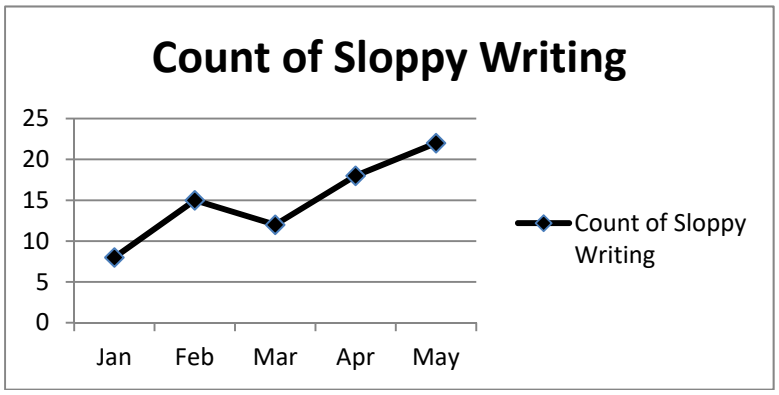
Data Collection (Sub-heading, bold but not all caps, 10 point, aligned left, bold, no line after to paragraph)
The two hundred students were asked to write 2 short papers during the semester…

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

DISCUSSION

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

Figure 1: Sloppy Writing During the Semester



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

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

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

*-Indicates significance at the 5% level)

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

CONCLUSIONS

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

Future research will try to determine causality.

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

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

Devad, S. and Flotz, J. Evaluation of Factors Influencing Student Class Writing and Performance. *American Journal of Farming Economics*. V. 78, Issue 3, pp 499-502.

Druden, G. and Ellias, L. (1995). *Principles of Economics*. New York: Irwin.

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

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

Terri Dactil, Ph.D., is a professor of business communication in the College of Business at High Plains University, Alberta, Canada. His research interests include instructional methods to improve student communication skills.

Endnote: (do not use word footnote or endnote formatting to accomplish this; see comments above)

1 The authors wish to acknowledge the assistance of graduate student Philipp Sleckin in compiling and reading numerous student papers.