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RESEARCH IN ACTION: USING RUBRICS TO ASSESS INFORMATION LITERACY SKILLS IN BUSINESS EDUCATION

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Marilyn Easter
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ABSTRACT

Information literacy—the ability to find, evaluate and use information effectively—is an essential skill set for college students but one that can be challenging to measure. This paper demonstrates that grading student assignments using analytic rubrics with measurable outcomes is a very effective way of meeting this assessment challenge. Students in upper-division business courses attended a library session on research skills and then were given course-embedded assignments, such as case analyses and research reports, designed to help them demonstrate their ability in using information. The completed assignments were measured using a standardized rubric and the results showed strong improvement in information literacy-related learning outcomes. This study also demonstrates how librarians enhance and support student learning of information literacy by teaching in-depth research skills. The results presented in this paper will be helpful to administrators, faculty, and librarians in higher education who are introducing programs on the development and assessment of information literacy skills.

INTRODUCTION

Higher education is facing an unprecedented challenge. It used to be that students were hampered by a scarcity of information. Now with current technology and a constant connection to the Internet, the opposite is true. Information overload seems to be the norm. To effectively sift through the millions of gigabits of information created every minute around the world and to use that information productively is a skill that students need in order to compete in the global business environment (Varga-Atkins & Ashcroft, 2004). It is part of the educator’s responsibility to ensure that students, particularly those in the business field, develop the skills they need to be information literate. According to the Association of American Colleges and Universities (n.d.), students who are information literate are able to:

- Determine the nature and extent of information needed
- Access the needed information effectively and efficiently
• Evaluate information and its sources critically and incorporate selected information into his or her knowledge base and value system
• Use information effectively to accomplish a specific purpose
• Access and use information ethically and legally

A 2013 poll conducted by the National Association of Colleges and Employers found that the ability to obtain and process information ranked in the top five of important skills/qualities employers looked for in new hires (NACE, 2013), and a survey of new college graduates that had been recently hired showed that "[almost] all of the participants agreed that a primary part of their jobs required them to find, evaluate, and use information to solve problems" (Head, 2012, p. 16).

Students today are digital natives who learned their alphabet from touch-screen devices even before they started any form of formal education (Sheesley, 2002). For many students, finding information is not a problem. A study of undergraduate students by the EDUCAUSE Center for Applied Research shows that 60% of those surveyed use smart phones to get information from the Internet outside of class and 40% to look up information on the Internet in class (Dahlstrom, Walker & Dziuban, 2013). Students have constant access to data. However, their ability to discern which types of information are relevant; to use these practically and effectively in specified situations; and to analyze the implications of this information still needs to be developed (Calzada & Marzal, 2013). Although students have continual access to information, there is a need to learn how to discern what is relevant and valid (Catts, 2012).

In the business world, information literacy is a set of skills that needs to be developed and honed through constant application (Varga-Atkins & Ashcroft, 2004). Educators can use coursework such as case studies, projects, and other assignments to let students practice and master these sets of skills. Librarians are also in a perfect position to strengthen students’ information-handling abilities. In fact, there is a long history of librarians working together with teachers and professors in developing information literacy skills (Hylen, 2005; Merchant, 2007).

This paper explores how library research sessions and carefully designed class assignments were used to strengthen students’ information literacy skills. It also demonstrates the effectiveness of analytic rubrics in assessing the students’ learning outcomes in this very important area of their education.

**RESEARCH PURPOSE AND SIGNIFICANCE OF THE STUDY**

This article presents the results of the assessment of students’ competency levels in three information literacy skills through the use of analytic rubrics with measurable outcomes. Through these means, instructors can help business students develop the information literacy abilities they need to bring value to their workplaces when they become professionals.

This study also presents analytic rubrics as a valid and credible instrument for the assessment of competency levels in information literacy learning outcomes as a result of a combined library instruction and implementation in actual coursework in business courses. This action research in assessment also highlights the
contribution of librarians in the academic objectives of the university in terms of developing student information literacy skills. This study would be helpful for administrators, faculty, and librarians in higher education when they consider introducing programs on developing information literacy skills and assessing their effectiveness in enhancing student skills and preparing them to be productive members of society.

The authors recognize that there is no specific way to measure competence in information literacy. However, it is critical to explore different approaches through which this may be accomplished. It is hoped that the results of this study will make faculty and administrators more aware of the importance of cultivating information literacy among undergraduate students and the impact of the collaboration between faculty and librarians in developing this skill set. This paper aims to contribute to the general field of knowledge about information literacy and its assessment using analytic rubrics. Although there are already existing publications about information literacy, there is a dearth of articles that deal with how this skill is manifested through students’ course work, particularly in the field of business study.

LITERATURE REVIEW

“Information literacy” encompasses a set of skills that are critical to running a company effectively. While this term is not used frequently in the workplace, most companies and organizations employ a variety of different phrases, such as information management, knowledge management, critical thinking, decision making and complex problem solving, to describe the concept (Conley & Gill, 2011; O’Connor, 2008). Whatever terms are used to describe this set of skills, the fact is that being information literate has a definite impact on any organization’s bottom line (Devasagayam, Johns-Masten, & McCollum, 2012; O’Connor, Radcliff & Gedeon, 2002; Reedy, Mallett, & Soma, 2013). Inaccurate and outdated information often leads to poor decision-making and the inability to evaluate information effectively is especially harmful because it can hurt a business strategically (Cheuk, 2008). The lack of information literacy can also hurt a company’s productivity.

According to a survey of 3,000 knowledge workers conducted by Basex (2008), workers spent up to 50% of their day managing and searching for information. This trend was also discovered in the public sector when a survey was conducted among 100 federal, state and local government employees (Clarke & O’Brien, 2012). When asked, “What percentage of time are you unable to find information you need to do your job, even though you are pretty sure your organization has that information?”, over 25% of respondents reported being unable to find or access the digital information they need more than 50% of the time (Clarke & O’Brien, 2012). Time spent looking and not finding the information required to do their job is a huge drain on employees’ productivity and company resources.

In a national workforce study conducted by the University of Phoenix (2011), commissioned by the Bill and Melinda Gates Foundation, 82% of the respondents rated “critical thinking and problem solving” as very important, and 69% also rated
“the ability to analyze and synthesize information” as very important. Both these skills are critical components of the information literate person and employees equipped with these skills are considered key assets of a company. Case in point, when the company Environmental Resources Management (ERM) instituted a program on information literacy skills for its employees, ERM discovered that their employees’ new abilities “added critical business value” and introduced “a culture of interacting with information to increase work productivity” (Cheuk, 2008, p. 142).

There is a general agreement in business schools and in the business world that information literacy skills are important. A survey conducted by the Association to Advance Collegiate Schools of Business (AACSB) revealed that 90% of the 146 libraries contacted provided information literacy instruction to their business students (Cooney, 2005). Although the teaching seems to be taking place, what is lacking is an effective way to measure if the learning has been achieved. According to Rochford and Borchert (2011), “Higher level learning skills such as analysis, synthesis, and evaluation do not readily lend themselves to objective examination” (p. 258) and may be challenging to measure. However, an assessment tool, the analytic rubric, seems particularly well suited to this task.

**INFORMATION LITERACY AND RUBRICS IN THE CONTEXT OF BUSINESS EDUCATION**

Rubrics, a mainstay of primary and secondary education, can serve as both a teaching and assessment tool in higher education. Rubrics have been proven to be effective in helping students become more conscious of the research and evaluation skills they need in order to do well at an assignment, or in their careers (Reddy & Andrade, 2010). A recent review of published articles and studies done on rubrics in higher education showed that, of the articles reviewed, only seven were published before 1997, a demonstration of the relatively late acceptance this form of assessment has had in universities and colleges (Jonsson & Svingby, 2007). Although a relative newcomer to higher education, the rubric is now employed in a variety of disciplines, including business, and is used to assess a wide mix of student projects, among them “concept maps, literature reviews, reflective writings, bibliographies, oral presentations, critical thinking, citation analyses, portfolios, projects and oral and written communication skills” (Reddy & Andrade, 2010, p. 437). Rubrics can also be used as more than a way to assign grades. They can be used in class for students’ self-assessments or peer-assessments and serve as valuable teaching aids in this way (Andrade, 2005; Knight, 2006; Reddy & Andrade, 2010).

A rubric provides a scoring scale of three to four levels, from excellent to poor, and describes in detail the specific elements that make for the superior or inferior completion of an assignment (Hafner & Hafner, 2003; Reddy & Andrade, 2010).

As delineated by Andrade (2005), rubrics are effective for a variety of reasons: they describe not only what a student should do to complete an assignment effectively but also what they should avoid; they help instructors detail the learning goals they have for their students; and they help rule out bias in grading (p. 439).
When a project is assigned and the specific criteria for success are spelled out at the same time, students know even before they begin work what is expected of them. With the aid of rubrics, instructors are given the opportunity to provide even-handed and honest feedback.

One other reason that rubrics are gaining in popularity is the change in emphasis of accrediting agencies, such as the AACSB and the Western Association of Schools and Colleges (WASC), away from a demonstration of what is being taught to a demonstration of what is being learned (Reddy & Andrade, 2010). WASC, which oversees the western region of the United States, recently redesigned its guidelines. WASC states that “institutions will be expected to demonstrate that their graduates have achieved the institution's stated level of proficiency at least in the following five areas: “written and oral communication, quantitative skills, critical thinking and information literacy” (WASC, 2012, p.9). Rubrics are an excellent way to assess the level of competency in specific knowledge areas and skills that the students acquired.

In this particular study, rubrics were very useful assessment tools because they provided instructors with an objective framework to specify and evaluate the information literacy skills that the students needed to demonstrate. The set of criteria presented in the rubric served as a guide for both the instructor and the students on the level of expected performance. The scoring scale shows the areas where students need to improve.

An important feature of the rubric is that it helps provide useful feedback to both the instructor and the students. On the part of instructors, feedback on the effectiveness of the instruction is given and this can help them focus on specific areas for improvement, especially when a majority of the students are turning in work that is sub-par. When this happens, there is an opportunity to look at the given criteria and evaluate the delivery or even the content of the learning material. Likewise, the scores on the rubrics give students more informative feedback and input about their areas of strength and where they need improvement.

Care should be taken when using this type of assessment, however. The effectiveness of the rubric depends on its design and clarity to the users. Designing a rubric is not an easy task. Educators have to ensure that the rubric is able to capture the learning outcomes of specific coursework. All criteria have to be very clearly articulated and integrated so that students can easily understand what is expected from each assignment. Students may not know how to use a rubric, thus instructors should take the time to explain and, if needed, reintroduce the rubric concept throughout the class (Andrade, 2005). For instructors, creating a rubric that is both valid and reliable is a task that is neither quick nor easy. Rubrics must align with the curriculum and the course learning objectives and be worded in a way that is not open to interpretation (Andrade, 2005).

METHODOLOGY AND RUBRIC DESIGN

This study encompasses six semesters (three academic years). The authors developed analytic rubrics with the intention of assessing information literacy among students in the College of Business. The rubric was used to score the course
work assigned to the students to determine their levels of mastery of essential information literacy skills. Figure 1 shows the flow of the research procedure conducted in each of the semesters.

![Figure 1: Flow of Activities](image)

Over the six semesters analyzed, 1,401 students were assessed on their information literacy skills after receiving approximately two hours of lecture in their classes from the College of Business librarian. Lectures covered information literacy skills and how to effectively use the library databases and the Internet to conduct research. Students were enrolled in one of the following business courses: Business Communication; Integrated Marketing Communication; Managerial Communication; Professional Relationship and Communications; Business Communication and Ethics; Introduction to Marketing; Introduction to Entrepreneurship; Planning New Ventures; Global Entrepreneurship; and Global Dimensions of Business. These courses represent a robust cross-section of students in various fields of business.

Prior to the start of each semester, the instructor contacted the librarian to arrange a time for students to meet at the library where they would receive a lecture tailored to their specific course. In preparation for the library lecture, the librarian reviewed the course syllabus and learning outcomes. The instructor and the librarian then agreed on content-related materials and learning objectives for the workshop.

Students were given a pre-test to establish each student’s competency benchmarks prior to attending the information literacy workshop. The students were asked to write a one-page analysis on a mini-business case given to them as homework. Students were then required to do research in order to answer questions given about the case. The results from this pre-test gave the professor an indication of the skill level of individual students. The rubric was designed to assess the students’ mastery of the competency standards, as defined by the Information Literacy Competency Standards (AAC&U, 2004). The rubric has three major categories to cover these skill areas: (1) communication of ideas, (2) ethical use and citation of resources; and (3) critical thinking, analysis and evaluation of data. The competency standards are defined as follows:
Table 1: Information Literacy Skills and Competency Level Table

<table>
<thead>
<tr>
<th>Skill</th>
<th>Competency Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication of ideas</td>
<td>Note: This specific skill does measure information literacy competency standards directly, but is a way to let students demonstrate their mastery of the standards. For the purposes of this particular study, the communication of ideas is done through written work, such as case analysis and research projects.</td>
</tr>
<tr>
<td>Ethical use and proper citation of sources</td>
<td>Access the needed information effectively and efficiently. Access and use information ethically and legally.</td>
</tr>
<tr>
<td>Critical thinking, analysis and evaluation of data</td>
<td>Evaluate information and its sources critically and incorporate selected information into his or her knowledge base and value system. Determine the nature and extent of information needed. Use information effectively to accomplish a specific purpose.</td>
</tr>
</tbody>
</table>

The analytic rubric used for all the pre- and post- tests is shown in Table 2: Table 2: Information Literacy Analytic Rubric

<table>
<thead>
<tr>
<th>Skill</th>
<th>Beginning Level</th>
<th>Proficient Level</th>
<th>Advanced Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication of ideas</td>
<td>Demonstrates minimal use of appropriate grammar and language. Major grammar and spelling errors. Occasionally uses relevant information and content in some parts of the work, but did not deliver an adequate understanding of the coursework requirement. Recommendations and conclusions are not clear.</td>
<td>Demonstrates appropriate use of grammar and language. Three to six errors noted in the document. Uses some relevant information and content through most of the work and delivered an adequate understanding of the requirement of the coursework. Some articulation of the recommendations and conclusions.</td>
<td>Demonstrates excellent use of grammar and language. Only one or two minor errors. Uses relevant information and content to shape the entire write up and to deliver a totally coherent understanding of what coursework requirement. Clear articulation of the recommendations and conclusions.</td>
</tr>
</tbody>
</table>
Following the pre-test, students attended the library research session. To achieve the information literacy learning objectives, the librarian guided students’ learning step by step. She first gave an overview of the library website with the focus on resources, such as databases and books, and tools for citing and writing. The librarian demonstrated how to build a search query in a database and compared that with a Google search. She then explained how to evaluate the credibility and accuracy of the search outcomes by using the rule of 5 W’s: who, where, when, why, and what. Next, she instructed students on how to interpret a citation and demonstrated how to build a reference list using the APA citation method.

Following the workshop, skills mastery was measured with two different post-tests at two different points during the semester. The first post-test was given within a week or two after the students attended the workshop. The second post-test was done on a terminal research project for the course, which was the culminating test of students’ information literacy skills.

**RESULTS AND DISCUSSION**

The results of the pre- and post-case analyses gathered from 1,401 students from Spring 2010 until Fall 2012 are presented in this section. The assessment results of 67 students were excluded from this study because they were not able to complete all three tests (e.g., some did the pre-test, but not the post-tests; some did not take the pre-test but only took the second post-test). Mastery of the standards is measured through three skills: communication of ideas; ethical use and citation of sources; and critical thinking, analysis and evaluation of data. Students’ information literacy competency skills were classified into beginning, proficient,
and advanced, based on their performances on these skills, using rubrics from AAC&U. For each semester, the progression of students from beginning to proficient to advanced levels was assessed through the pre-test and first and second post-tests.

The results of this research suggest that the learning model adopted to develop information literacy skills among students is promising. In general, the results across the three-year study are consistent in showing that a majority of the students who went through the program exhibited an improvement in their skills from beginning to proficient and advanced by the time the second post-tests were conducted.

**Skill 1: Communication of Ideas:** Students are expected to be able to express their ideas clearly and logically in written communication to demonstrate the application of their competency in information literacy. Although communication is not part of the defined competency standards for information literacy, it is through written work that students are able to exhibit their mastery of these skills. Through the written work, students should demonstrate effectiveness in communicating their strategies and conclusions based on the analysis and evaluation of the information they have at hand.

In Spring 2010, the percentage of students at the beginning level was at 43%, and this decreased to 6% towards the end of the semester. At the same time, students who exhibited proficiency in this skill rose by 30% (from 45% to 75%) during the same period. The results taken from the three-year study show that there is an improvement in this skill across the board. In the last assessment period, Fall 2012, the students at the beginning level fell to only 3% at the time the second post-test was conducted.

![Figure 2: Skill #1: Communication of Ideas](image)

**Skill 2: Ethical Use and Citation of Sources:** A critical skill that students should develop is to understand where and how to locate credible resources. At the same
time, they should be able to recognize the importance of maintaining their intellectual integrity by avoiding plagiarism and properly citing their sources. During the library workshops, students were taught how to conduct research on the Internet beyond just “Googling.” They were taught how to make a distinction between scholarly and popular articles, and how to use the university library research website to locate tools that could help them find credible information. Students were also introduced to and taught how to use online citation tools such as RefWorks so that they could document sources properly.

In Spring 2010, students at the beginning level at the time the pre-test was done was at 70% and this dropped down to 4% by the time the semester ended. At the same time, a majority of the students (74%) moved to the proficient level at the time the second post-test was conducted towards the end of the semester. This trend continued through the next five semesters, with the most dramatic decrease in the beginning level – from 82% to 1%--in the last semester assessed (Fall 2012). The improvement of the competency levels of the students in this area is encouraging. It demonstrates that proficiency of the students in this area can be improved through application of the knowledge they acquired in various coursework throughout the semester.

Figure 3: Skill #2: Ethical Use and Citation of Sources

Skill 3: Critical Thinking, Analysis and Evaluation of Data: Being information literate means knowing how to use information for a specific purpose. Given the vast amount of information available to students over the Internet, students should be able to identify what types of information will be useful to them. Once this has been accomplished, students should be able to analyze the information they acquired and create strategies to address the business issues given in the cases assigned and in the research project. The terminal project for the courses assessed
was a research project where students demonstrated their ability to use the information they collected in determining the best course of action for the business situations presented in the project.

In Spring 2010, students at the beginning level in the pre-test was at 48%, very close to the number of students at the proficient level – 46%. At the end of the semester, the students at the beginning level dropped down to 4%, while those at the proficient level increased to 83%. However, this trend was not exhibited throughout the course of the study. In the following semesters, the percentage of students moving to the proficient level never went higher than 70% towards the end of the semester. This might be an indication that most students may know where and how to find information, but they might be experiencing some challenges in analyzing and evaluating the information for specific purposes.

![Skill 3: Critical Thinking, Analysis and Evaluation of Data](image)

Figure 4: Skill #3: Critical Thinking, Analysis and Evaluation of Tool

CONCLUSIONS

Information literacy skills are crucial for students who plan to enter the business world. Business faculty can help develop and strengthen these skills by assigning case analyses, projects, assignments, and reports designed to immerse the students in simulated business situations. Through the use of analytic rubrics with measurable outcomes, instructors can accurately assess the level of competence achieved by the students in terms of the abilities encompassed within the definition of information literacy, particularly critical thinking. This gives the instructor an idea of the level of preparedness of the students for the workplace. Librarians enhance these lessons by providing in-depth instruction in research skills, which is a necessary first-step in developing information literacy. Taken altogether, this
approach is effective in aiding students in developing information literacy for the work world of today.

The assessment results were useful in helping faculty and administrators chart a program for the improvement of information literacy skills among students. To help improve students’ communication skills, a liaison program was put in place to encourage greater and deeper dialogue between the business school and the departments teaching students business writing skills. Learning objectives were discussed and outcomes established in the writing courses. These programs are now in place and it is hoped that the College of Business will be able to address the areas of weaknesses revealed by the assessment.

Based on the assessment results, the Undergraduate Curriculum Enhancement Project (UCEP) committee is working with the different departments in the College of Business to find ways to strengthen skills in business-oriented analysis. Some of the courses are being redesigned and several pilot initiatives are being developed to focus on honing critical analytical skills. A program for incoming freshmen and transfer students was implemented and one of the key events at the orientation program was an introduction and application of research and analysis skills to a business case.

Moving forward, additional demographic data such as GPA, grades from previous relevant courses, and age range can be collected at the time of the pre-test to provide context to the benchmark grade that students receive. This additional background information will allow the instructor to redesign assignments as necessary to help students hone their information literacy skills. Assessing critical thinking is especially challenging and restructuring assignments to better measure this skill is a work in progress.

REFERENCES


INTEGRATING ENHANCED BUSINESS REPORTING AND ECONOMIC VALUE ADDED: AN APPLIED PEDAGOGICAL OPPORTUNITY

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Randolph College
Fran M. Wolf
Youngstown State University

ABSTRACT: This paper discusses the integration of Enhanced Business Reporting with Economic Value Added for purposes of financial analysis. Combining these concepts provides a richer and more useful financial reporting model than either model individually. Further, it provides more helpful business valuation information than do traditional financial statements prepared according to generally accepted accounting principles. Finally, a numerical example based on a “real-world” public corporation is used to illustrate the integrative concept.

INTRODUCTION

Accounting and finance professionals agree that generally accepted accounting principles (GAAP) were primarily developed to measure the performance of post-depression manufacturing enterprises such as railroads and automobile makers. Financial statements based upon GAAP do an inadequate job of accounting for intangibles which are characteristic of modern companies. As a result stock prices and financial statements may not be a perfect reflection of one another. Kapoor (2006) argues that a firm’s income statement may explain only 4 percent of a company’s stock price, while the balance sheet describes another 25 percent.

Some accountants have tried to increase the relevance and transparency of financial statements through the use of Enhanced Business Reporting (EBR) information. Similarly, financial analysts have employed Economic Value Added (EVA) in order to ameliorate the shortcomings associated with GAAP based financial statements. This study examines the advantages and disadvantages of each method as well as how they may overlap. Discussion is presented to illustrate integrating EBR and EVA within the finance curriculum. Finally, a numerical example is offered.

ENHANCED BUSINESS REPORTING

In 2002, the American Institute of Certified Public Accountants (AICPA) created the Enhanced Business Reporting Special Committee to study the lack of transparency and relevance in current financial statement reporting. Task forces
for both public and private companies developed a framework to provide recommendations for improved reporting. The immediate goal was to create a supplementary financial reporting model that better reflects both current and future aspects of firm value. The overall objective is to obtain stock pricing that values the company more effectively and leads to more efficient financial markets. In 2005, the Special Committee culminated its work with the creation of the Enhanced Business Reporting Consortium.

Currently, EBR provides for voluntary disclosure of supplemental information, and it is being used internationally by a number of companies. The EBR framework includes four dimensions of additional information: business landscape; strategy; competencies and resources; and performance. The business landscape aspect concentrates on how industry and market forces impact the company. Strategy emphasizes the firm’s internal stance on issues such as risk management as well as its business model. Competencies and resources measure how the firm stacks up on intellectual capital, R&D expenditures and assets. Finally, the performance dimension attempts to integrate the previous three aspects and provide measurements of success such as profitability and liquidity. Exhibit 1 lists the four dimensions and some of the recommended topics to be covered. For a more detailed version of this framework, see www.ebr360.org – the official web site of the Enhanced Business Reporting Consortium. Additions to, and evolutions in, the framework are also included there.

Exhibit 1: Examples of Suggested Detail in EBR Framework

<table>
<thead>
<tr>
<th>A. Business Landscape</th>
<th>C. Competencies and Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overview</td>
<td>1. Key Processes</td>
</tr>
<tr>
<td>2. Competition</td>
<td>2. Customer Satisfaction</td>
</tr>
<tr>
<td>4. Legal</td>
<td>4. Information and Technology</td>
</tr>
<tr>
<td>5. Political</td>
<td>5. Financial Assets</td>
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<tr>
<td>6. Regulatory</td>
<td>6. Physical Assets</td>
</tr>
<tr>
<td>7. Technological Change</td>
<td>7. Innovation</td>
</tr>
<tr>
<td>8. Shareholder Relations</td>
<td>8. People</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Strategy</th>
<th>D. Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Business Model</td>
<td>1. Profitability</td>
</tr>
<tr>
<td>2. Organization</td>
<td>2. Liquidity</td>
</tr>
<tr>
<td>3. Risk Management</td>
<td>3. Operating</td>
</tr>
<tr>
<td>5. Product Life Cycle</td>
<td></td>
</tr>
<tr>
<td>6. Governance</td>
<td></td>
</tr>
</tbody>
</table>
Finally, the proposed EBR framework illustrates and reinforces the connection between strategic planning/analysis and firm valuation. For instance, strategic management factors identified by Porter (1980) such as competitors, customers, and regulators are also on the EBR list (Exhibit 1). Similarly, an organizational analysis of strengths, weaknesses, opportunities, and threats (SWOT) would likely incorporate a number of the items listed in Exhibit 1 (e.g., competition, buyers/customers, political/regulatory, core competencies, customer satisfaction, technology, financial resources, people/management, profitability, etc.).

ECONOMIC VALUE ADDED

Economic Value Added (EVA) is a comprehensive plan to increase shareholder wealth through focusing all corporate employees on value maximizing activities. EVA is the brainchild (and trademark) of Stern Stewart & Co. This company (through their founding partners Joel Stern and G. Bennett Stewart) has published and popularized the concept (Stewart, 1991). Stern Stewart & Co. is a global consulting firm that assists corporations in implementing the EVA program throughout their entire organization.

The basic premise of EVA is that financial statements prepared according to GAAP are flawed in two ways. First, there is a systematic understatement of assets and overstatement of expenses. For example, GAAP requires investments in research and development (R&D) to be expensed in the period they are incurred. The success of many companies’ R&D program is integral to their success but is not measurable on the financial statements. Indeed, engaging in value maximizing R&D actually penalizes perceived financial performance through lower profitability. Similarly, employee training and development is treated as a current expense. However, this investment in employees may very well be creating a competitive advantage for the organization. Like R&D, a firm’s employees may be one of its most important assets, yet they are not reflected on the balance sheet. Rather, their associated costs hurt the firm as an expense on the income statement. Second, a company may be profitable according to its income statement. However, a firm whose cost of capital exceeds its generated return is actually destroying shareholder wealth, a concept that is totally unrecognized by GAAP.

Businesses that recognize these flaws can translate traditional financials into EVA financials by adding back value enhancing performance (e.g., R&D) to the income statement and balance sheet. The company can then employ this EVA framework to reward and provide incentives to all employees in the organization. The incentives are tied to creating as many value added opportunities as possible without worrying about the ramifications of GAAP rules.

Simply put, \[ \text{EVA} = (\text{ROIC} - \text{WACC}) \times \text{capital employed} \] or \[ \text{EVA} = \text{Adjusted NOPAT} - (\text{WACC} \times \text{capital employed}) \]

Where:
- \( \text{ROIC} \) = return on invested capital
- \( \text{WACC} \) = weighted average cost of capital
- \( \text{NOPAT} \) = net operating profit after taxes
Adjusted NOPAT results from modifying the income statement for the accounting difficulties discussed above. The major challenge to using EVA is discovering and making the accounting adjustments that may be necessary. Hawawini and Viallet (2011) note that more than 100 potential accounting adjustments have been recognized. They suggest that a company choose and implement those that are most critical to its success.

It should also be noted that many measures of financial success use a more generic version of EVA. Numerous models and textbooks include those aspects of EVA that are more amenable to their goals or audience. Easton et al. (2013), for example, employ a model that uses many of these components but downplays the cost of capital component, assuming that companies are already aware of this requirement. Internet searches provide abundant performance measurements that employ parts of the model. The trademarked EVA concept includes consistent terminology and incentive programs throughout the corporation.

Pratt and Hirst (2009) argue that since the income statement includes the cost of debt (as interest expense) then what is missing is the cost of equity. One way of measuring value creation (or destruction) then is to calculate return on equity which will include the cost of debt (via the deduction of interest expense in the calculation of net income). From this figure, the analyst may deduct the cost of equity. This net ROE then indicates the wealth impact. The firm creates wealth if net ROE is positive and destroys wealth if net ROE is negative.

EVA Momentum allows the change in EVA to be measured as a ratio. The change in EVA in one year (quarter) is divided by the prior year (quarter) sales figure. Ehrbar (2011) argues the superiority of the metric in multiple ways. Performance at the margin, diverse unit comparability and clear cut interpretation (positive and higher are always preferred to negative and lower) are facilitated with the measure.

ADVANTAGES AND DISADVANTAGES

The strength of EBR is the comprehensive nature of the disclosed information. The framework, created with the input of many investor stakeholders over a number of years, continues to evolve. A proper application of EBR would better explain corporate valuation. The primary disadvantage of EBR is that it adds complexity and interpretation issues to financial reporting. This is somewhat paradoxical because one of the stated objectives of EBR is to simplify financial reporting. Beattie et al. (2004) note that unquantifiable and descriptive information often increases the quality and usefulness of financial reporting. These authors recommend a four-dimensional framework as well as computer-assisted methodology to analyze this type of data. Clearly, the average user who is attempting to interpret and make decisions based upon these subjective descriptions would encounter considerable difficulties.

Aside from a lack of objectivity, there are comparability issues because different companies may have substantially different interpretations and descriptions of the same EBR scenarios. Tackett et al. (2007) argue that the cost of auditing EBR information may well outweigh its potential benefits. The authors
discuss the many ways companies could manipulate the system thereby creating potentially misleading or deceptive financial disclosures.

The primary disadvantage of EVA is that many corporate drivers of success (covered by EBR) are ignored. However, most companies do discuss many of these items within the annual report, and more specifically, within their segment analysis. A further drawback of EVA includes the complex adjustments that must be made to GAAP derived financial statements.

The advantage of EVA is that current financial statements can be adjusted for many of the frailties of current GAAP. Most users of financial information are at least somewhat familiar with financial statements. The adjustments would be made by accountants and could be explained to users. The basic concepts of EVA (NOPAT, Cost of Capital, Return on Investment) are employed by other valuation systems as well. This analysis (along with the present disclosure in annual reports) may prove easier, less costly, and more objective. Finally, comparability is easier both within industries and across companies.

THE RESULT

The Enhanced Business Reporting Consortium provides four examples of EBR reports produced by consulting firms, accounting firms and researchers. One of these is the eXchange model which combines components of both EBR and the basic components of EVA—e.g., NOPAT, Return on Invested Capital, and cost of capital. Ballow et al. (2005), part of the Accenture consulting team that created the eXchange model, discuss items that must be added to current financials to implement some of the recommendations provided by the Consortium. The authors suggest that a minimal amount of additional disclosures would be required. They also recommend four new statements that would complement the basic GAAP required statements as well as assist in better explaining corporate valuation.

The new disclosures would include cost of capital (after, e.g., adjustment of operating leases into balance sheet debt), return on invested capital, invested capital (adjusted, e.g., for operating leases), information necessary to adjust NOPAT, and market capitalization data. The four new EBR statements would reconcile GAAP statements as well as the new disclosures.

ILLUSTRATIVE EXAMPLE

To provide an opportunity for application, integration, and analysis of the EBR and EVA concepts, a case analysis was constructed using the financial information from RPM International Inc. Relevant data and information from the original corporate annual reports for 2008 and 2010 were used for the exercise (Exhibits 2 and 3). The years were chosen due to the state of the economy at those particular times. Firms were experiencing the “Great Recession” in 2008 and the economy was in a period of growth in 2010. Thus, the financial information will allow for an analysis from two very distinct and contrasting time periods. The
analysis will consist of several parts. First, students will construct a modified “Managerial” Balance Sheet (Exhibit 4) as opposed to the traditional GAAP balance sheet. Then, EVA will be calculated (Exhibit 5). This will be followed by a Statement of Enterprise Value (Exhibit 6) and a Statement of Total Economic Profit (Exhibit 6). The students will then be able to evaluate the statements, interpret the results, and draw conclusions.

ANALYSIS

Exhibit 2: RPM Inc. Consolidated Balance Sheet (in thousands)

<table>
<thead>
<tr>
<th>Assets</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and short-term investments</td>
<td>$ 231,251</td>
<td>$ 215,355</td>
</tr>
<tr>
<td>Trade accounts receivable (less allowances of $24,554 in 2008, $20,525 in 2010)</td>
<td>817,241</td>
<td>632,485</td>
</tr>
<tr>
<td>Inventories</td>
<td>476,149</td>
<td>386,982</td>
</tr>
<tr>
<td>Deferred income taxes</td>
<td>37,644</td>
<td>19,788</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>211,690</td>
<td>194,126</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>1,783,975</td>
<td>1,448,736</td>
</tr>
<tr>
<td><strong>Property, Plant and Equipment, at Cost</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td>33,299</td>
<td>33,026</td>
</tr>
<tr>
<td>Buildings and leasehold improvements</td>
<td>302,373</td>
<td>633,506</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>719,045</td>
<td></td>
</tr>
<tr>
<td><strong>Less allowance for depreciation and amortization</strong></td>
<td>1,054,719</td>
<td>924,086</td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>556,998</td>
<td>541,559</td>
</tr>
<tr>
<td><strong>Other Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goodwill</td>
<td>908,358</td>
<td>768,244</td>
</tr>
<tr>
<td>Other intangible assets, net of amortization</td>
<td>384,370</td>
<td>303,159</td>
</tr>
<tr>
<td>Deferred income taxes, not-current</td>
<td>88,754</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>100,389</td>
<td>101,358</td>
</tr>
<tr>
<td><strong>Total other assets</strong></td>
<td>1,481,871</td>
<td>1,172,761</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$3,763,567</td>
<td>$3,004,024</td>
</tr>
</tbody>
</table>

| Liabilities and Stockholders’ Equity        |          |          |
| **Current Liabilities**                     |          |          |
| Accounts payable                            | $411,448 | $299,596 |
| Current portion of long-term debt           | 6,934    | 4,307    |
| Accrued compensation and benefits           | 151,493  | 136,908  |
| Accrued loss reserves                       | 71,981   | 65,813   |
| Asbestos-related liabilities                | 65,000   | -        |
| Other accrued liabilities                   | 139,505  | 124,870  |
| **Total current liabilities**               | 846,361  | 631,494  |

| Long-Term Liabilities                      |          |          |
| Long-term debt, less current maturity      | 1,066,687| 924,308  |
| Asbestos-related liabilities               | 494,745  | 243,829  |
| Deferred income taxes                      |          | 43,152   |
| **Total long-term liabilities**            | 1,561,432| 1,168,037|
| **Total liabilities**                      | 2,627,011| 1,842,783|

| Stockholders’ Equity                       |          |          |
| Preferred stock, par value $0.01; authorized 50,000 shares, none issued | -        | -        |
Heinfeldt and Wolf

<table>
<thead>
<tr>
<th>Common stock, par value $0.01; authorized 300,000 shares;</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Issued and outstanding 122,189 as of 2008</td>
<td>1,222</td>
</tr>
<tr>
<td>Issued and outstanding 129,918 as of 2010</td>
<td>-</td>
</tr>
<tr>
<td>Paid-in capital</td>
<td>612,441</td>
</tr>
<tr>
<td>Treasury stock, at cost</td>
<td>(6,057)</td>
</tr>
<tr>
<td>Accumulated other comprehensive income</td>
<td>101,162</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>427,788</td>
</tr>
<tr>
<td>Total RPM International Inc. stockholder’s equity</td>
<td>-</td>
</tr>
<tr>
<td>Non-controlling interest</td>
<td>-</td>
</tr>
<tr>
<td>Total stockholders’ equity</td>
<td>1,136,556</td>
</tr>
</tbody>
</table>

Exhibit 3: RPM Inc. Consolidated Statements of Income (in thousands)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>$3,643,791</td>
<td>$3,412,716</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>2,145,254</td>
<td>1,977,341</td>
</tr>
<tr>
<td>Gross profit</td>
<td>1,498,537</td>
<td>1,435,375</td>
</tr>
<tr>
<td>Selling, general and administrative expenses</td>
<td>1,124,419</td>
<td>1,105,882</td>
</tr>
<tr>
<td>Asbestos charges</td>
<td>288,100</td>
<td>-</td>
</tr>
<tr>
<td>Goodwill and other asset impairments</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Interest expense, net</td>
<td>46,964</td>
<td>59,273</td>
</tr>
<tr>
<td>Investment (income) expense, net</td>
<td>-</td>
<td>(7,376)</td>
</tr>
<tr>
<td>Other expense, net</td>
<td>-</td>
<td>9,342</td>
</tr>
<tr>
<td>Income (loss) before income taxes</td>
<td>39,054</td>
<td>268,454</td>
</tr>
<tr>
<td>Provision (benefit) for income taxes</td>
<td>(8,655)</td>
<td>87,327</td>
</tr>
<tr>
<td>Net income (loss)</td>
<td>47,709</td>
<td>181,127</td>
</tr>
<tr>
<td>Less: Net income attributable to non-controlling interests</td>
<td>-</td>
<td>1,090</td>
</tr>
<tr>
<td>Net income attributable to RPM International Inc. Stockholders</td>
<td>$47,709</td>
<td>$180,037</td>
</tr>
</tbody>
</table>

Additional Information:

- From Consolidated Statement of Cash Flows:
  - Income taxes paid: $59,978 m.
  - Interest paid: $45,09 m.

- From Notes to the Financial Statements:
  - R&D: $40.2 m.
  - Advertising: $39.9 m.

Exhibit 4: “Managerial” Balance Sheet for RPM Inc. (in thousands)

<table>
<thead>
<tr>
<th>“Managerial” Balance Sheet</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$231,251</td>
<td>$235,355</td>
</tr>
<tr>
<td>Net Working Capital Requirements:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Current Assets-Cash)-(Current Liabilities-Current Portion of LT Debt)</td>
<td>713,297</td>
<td>606,194</td>
</tr>
<tr>
<td>Net PPE + Total Other Assets</td>
<td>1,979,592</td>
<td>1,555,288</td>
</tr>
<tr>
<td>Total Operating Capital Employed</td>
<td>$2,924,140</td>
<td>$2,376,837</td>
</tr>
<tr>
<td>ST Debt (Current Portion of LT Debt)</td>
<td>$6,934</td>
<td>$4,307</td>
</tr>
<tr>
<td>LT Debts (Total LT Liabilities)</td>
<td>1,780,650</td>
<td>1,211,289</td>
</tr>
<tr>
<td>Stockholders’ Equity</td>
<td>1,135,556</td>
<td>1,161,241</td>
</tr>
<tr>
<td>Total Operating Capital Supplied (Invested)</td>
<td>$2,924,140</td>
<td>$2,376,837</td>
</tr>
</tbody>
</table>

Exhibit 5: Economic Value Added Calculation for RPM Inc. (in thousands)

<table>
<thead>
<tr>
<th>EVA Calculation</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT (EBT + Interest Expense - Investment Income)</td>
<td>$86,018</td>
<td>$320,151</td>
</tr>
<tr>
<td>+ R&amp;D (from Notes to Financial Statements)</td>
<td>40,200</td>
<td>41,300</td>
</tr>
<tr>
<td>+ Advertising (from Notes to Financial Statements)</td>
<td>39,900</td>
<td>39,400</td>
</tr>
</tbody>
</table>
Journal of Business and Educational Leadership

<table>
<thead>
<tr>
<th>Statement of Enterprise</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Closing Share Price of Equity</td>
<td>$22.02</td>
<td>$20.66</td>
</tr>
<tr>
<td>x Number of Shares Outstanding (per RPM Balance Sheet)</td>
<td>122,189</td>
<td>129,918</td>
</tr>
<tr>
<td>Market Value of Equity</td>
<td>2,690,602</td>
<td>2,684,106</td>
</tr>
<tr>
<td>+ Market Value of Debt (approx. by ST+LT Debt per Managerial Balance Sheet)</td>
<td>1,787,584</td>
<td>1,215,596</td>
</tr>
<tr>
<td>Enterprise Value</td>
<td>4,478,186</td>
<td>3,899,702</td>
</tr>
<tr>
<td>Economic Profit of Current Value (EPCV per Exhibit 5)</td>
<td>(247,681)</td>
<td>68,164</td>
</tr>
<tr>
<td>WACC (per S&amp;P Stock Report)</td>
<td>12.1%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Value of EPCV in Perpetuity (EPCV/WACC)</td>
<td>(2,046,950)</td>
<td>563,339</td>
</tr>
<tr>
<td>+ Invested Capital (per Managerial Balance Sheet)</td>
<td>2,924,140</td>
<td>2,376,837</td>
</tr>
<tr>
<td>Current Value</td>
<td>877,190</td>
<td>2,940,176</td>
</tr>
<tr>
<td>Enterprise Value</td>
<td>4,478,186</td>
<td>3,899,702</td>
</tr>
<tr>
<td>Less: Current Value</td>
<td>877,190</td>
<td>2,940,176</td>
</tr>
<tr>
<td>Future Value</td>
<td>3,600,996</td>
<td>999,526</td>
</tr>
<tr>
<td>Statement of Total Economic Profit</td>
<td>2008</td>
<td>2010</td>
</tr>
<tr>
<td>EBIT (EBT + Interest Expense - Investment Income)</td>
<td>$86,018</td>
<td>$320,151</td>
</tr>
<tr>
<td>+ R&amp;D (from Notes to Financial Statements)</td>
<td>40,200</td>
<td>41,300</td>
</tr>
<tr>
<td>+ Advertising (from Notes to Financial Statements)</td>
<td>39,900</td>
<td>45,090</td>
</tr>
<tr>
<td>Less: Cash Taxes (from Cash Flow Statement)</td>
<td>59,978</td>
<td>45,090</td>
</tr>
<tr>
<td>Net Operating Profit After Taxes (NOPAT)</td>
<td>106,140</td>
<td>355,761</td>
</tr>
<tr>
<td>Invested Capital (per Managerial Balance Sheet)</td>
<td>2,924,140</td>
<td>2,376,837</td>
</tr>
<tr>
<td>x Weighted Average Cost of Capital (WACC)</td>
<td>12.1%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Capital Charge</td>
<td>353,821</td>
<td>287,597</td>
</tr>
<tr>
<td>Economic Profit of Current Value (EPCV = NOPAT-Capital Charge)</td>
<td>(247,681)</td>
<td>68,164</td>
</tr>
<tr>
<td>+ Economic Profit of Future Value (EPFV = WACC x Future Value)</td>
<td>435,721</td>
<td>116,103</td>
</tr>
<tr>
<td>Total Economic Profit</td>
<td>188,040</td>
<td>184,267</td>
</tr>
</tbody>
</table>

DISCUSSION AND SUMMARY

From 2008 to 2010, the following significant changes can be observed:
Managerial Balance Sheet:
1) PPE and Total Other Assets declined by more than 20%.
2) Debt decreased by over 30%.

25
EVA calculation:

1) EBIT increased substantially.
2) NOPAT increased substantially.
3) The decrease in Debt from the Managerial Balance Sheet is reflected in Invested Capital and a corresponding reduction in Capital Charge.
4) EVA increased very significantly (and negative to positive) due to a combination of increasing EBIT, increasing NOPAT, and declining Capital Charge.

Statement of Enterprise Value:

1) The reduction in Enterprise Value is due primarily to a decrease in Debt value. A drop in stock price was offset by an increase in the number of shares resulting in a slight decline in the Equity value component.
2) The increase in the Value of EPCV in Perpetuity, which was due to the increase in EPCV (i.e., EVA), more than offset the reduction in Invested Capital. This results in a significant increase in the Current Value portion of Enterprise Value.
3) Combining the decline in Enterprise Value with the large increase in Current Value, the Future Value component dropped considerably from 2008 to 2010.

Statement of Total Economic Profit:

1) While Total Economic Profit is similar ($188,040 vs. $184,267), the composition is distinctly different. Due to poor operations in 2008, the EPCV (i.e., EVA) is negative. The 2008 Total Economic Profit is positive due to a significant positive value in EPFV (resulting from a large Future Value component).
2) In 2010, a substantial improvement in operations combined with a reduction in Debt (and the associated Capital Charge) provided for a significant contribution to Total Economic Profit from EPCV. The aforementioned decline in Future Value reduced the EPFV portion of Total Economic Profit.

In summary, the progression through these statements provides students with a clear and concise format for applying, integrating, and evaluating (analyzing) EVA and EBR concepts. For example, this exercise allows for the integration of EBR related factors such as consumers, competitors, intellectual property, and innovation via the advertising and R&D adjustments to NOPAT as part of the EVA calculation. In addition, performance measures related to profitability and operations are reflected through the calculation of net operating profit after taxes (NOPAT) as well as economic profit of current value, economic profit of future value, and total economic profit.
REFERENCES


BEST PRACTICES FOR TEACHING ACCOUNTING COURSES ONLINE

Consolacion Fajardo
National University

ABSTRACT
This article discusses the best practices in teaching and learning online accounting courses in a large university with significant online presence. It provides strategies and techniques that result to more effective and efficient teaching/learning. It includes topics such as course outline, program learning outcomes, course learning outcomes, asynchronous threaded discussion, synchronous live chat sessions, and grading factors in the assessment of students’ achievement in the course. It is hoped that this research will contribute to a more productive learning and teaching experience in the global virtual classrooms.

Keywords: best practices, online courses, learning outcomes, course outline, synchronous live chats, asynchronous threaded discussion, assessment

BEST PRACTICES

There are a variety of best practices being offered by professional organizations and educational institutions with the goal of providing quality education, improving teaching performance, and enhancing student’s learning experience and success in the online environment.

Best Practices have been developed by the eight regional accrediting commissions in response to the emergence of technologically mediated instruction offered at a distance as an important component of higher education. These Best Practices are designed to assist educational institutions planning to offer online courses and to provide a self-assessment framework for those already having online programs. The two main goals are quality distance education and assessment of faculty and students’ performance. Developed to reflect current best practice in online education, these Best Practices were initially drafted by the Western Cooperative for Educational Telecommunications (WCET). These Best Practices consist of five separate components: (1) Institutional Context and Commitment, (2) Curriculum and Instruction, (3) Faculty Support, (4) Student Support, and (5) Evaluation and Assessment (WCET, 2001).

Irlbeck (2008) aligned the foundational statements for best practices of Capella University to the International Board of Standards for Training Performance and
Instructions (IBSTPI) competencies that include: (1) Build faculty–learner relationship, (2) Manage and facilitate the learning process, (3) Build and communicate professional expertise, and (4) Assess learning and teaching [10]. In 2007, the faculty initiated the process which was finalized in 2008 with corporate commitment and support for implementation incorporating best practices for faculty. The Office of Faculty Engagement reinforces the best practices efforts and continues to emphasize key aspects of success in teaching and learning.

THEORETICAL CONSTRUCTS

In an online environment the teacher becomes the facilitator, guide, and coach in the teaching/learning process. This embodies a paradigm shift. It emphasizes a student-centered approach, problem oriented, uses multiple resources, and the virtual classroom learning/teaching activities are linked to the real world setting. Andragogy, Self-regulated Learning and, Engagement Theory are three different but related theories that are relevant to the qualities and attributes that contribute to learners’ success in online learning.

Andragogy: Andragogy is the art and science of helping adults learns (Lee 1998). Lee’s article stated that Malcolm S. Knowles (who died in 1997 at the age of 84) was considered the father of adult education and was one of the strongest advocates of andragogy. Andragogy focuses on the characteristics of adult learners and a set of assumptions for most effectively teaching adults: self-concept, experience, readiness to learn, orientation to learning, and motivation. The essence of the theory is that the adult learners need to be self-motivated and to be active participants in their own learning (Knowles, et al, 2005).

Intentional Learning/Self-regulated Learning: While not termed andragogy, the recommendations of the Accounting Education Change Commission were based on the andragogical paradigm. AECC maintained that educators must prepare graduates to become accounting professionals by equipping students with lifelong learning skills. Intentional learning is the focus of the AECC monograph and is defined as learning with self-directed intent and choice of how and what to learn (AECC, 1990).

Smith (2001) describes lifelong learning as either self-directed learning or self-regulated learning. Self-directed learning is the term often used in the study of adult education outside a formal educational setting, while self-regulated learning focuses on students in a formal educational setting. Smith’s study focused on the review of research on self-regulated learning. Smith provided a self-regulated learning model that includes what she calls self-regulatory attributes and self-regulatory processes. Self-regulatory attributes include: (a) self-efficacy, which refers to situation specific self-confidence in one’s ability to organize and execute a course of action to attain certain outcomes), (b) self-awareness which means knowledge of one’s own person, task, and strategy in a given context, and (c) resourcefulness which means control of physical surroundings to optimize performance, such as seeking help from social sources such as persons or other
Self-regulatory processes consist of: (a) attributions that pertain to views regarding the causes of an outcome which can be internal or external, controllable or uncontrollable, (b) goal setting which guides the learning effort in a particular direction and serves as a standard for performance, and (c) self-monitoring representing the intentional efforts to control the learning process by comparison of performance to a standard or a goal. At the core of this model is self-motivation or the inner drive to learn. Smith posited that self-regulatory attributes and self-regulatory processes influence the strength of the learner’s self-motivation.

Engagement Theory: Kearsley (2000) cited another learning theory called Engagement Theory, which may be viewed as another version of the andragogical paradigm. The Engagement Theory posits that the learner must be actively engaged in a meaningful task to achieve effective learning. The Engagement Theory states that all learning must have three important characteristics: (1) collaboration or the interaction among students, teachers, and subject-matter experts via e-mail, discussion forums, and conferencing, (2) problem-based, which means that all student activities involve completing assignments or projects rather than taking tests or exams, and (3) authenticity where all course materials and activities are realistic and directly related to the student’s interests.

This piece of research documents the Best Practices in the Bachelor of Science in Accountancy program of an online university which were patterned after the five Best Practices components as delineated by the Western Cooperative for Educational Telecommunications (2001): (1) Institutional Context and Commitment, (2) Curriculum and Instruction, (3) Faculty Support, (4) Student Support, and (5) Evaluation and Assessment.

METHODOLOGY

This paper will document the implementation of the five components of Best Practices as they apply to the Bachelor of Science in Accountancy of a large university in California with significant online presence.

DISCUSSIONS

Institutional Context and Commitment: The university’s mission is to make lifelong learning opportunities accessible, challenging, and relevant to a diverse student population. Its aim is to facilitate educational access and academic excellence through exceptional management of university operations and resources, innovative delivery systems and student services, and relevant programs that are learner-centered, success-oriented, and responsive to technology. This mission is supported by seven Institutional Learning Outcomes: (1) Apply information literacy skills necessary to support continuous, lifelong learning, (2) Communicate effectively orally and in writing, and through other appropriate modes of expression, (3) Display mastery of knowledge and skills in a discipline, (4) Demonstrate cultural and global awareness to be responsible citizens in a diverse society, (5) Demonstrate professional ethics and practice academic integrity, (6) Utilize research and critical thinking to solve problems, (6) Utilize
research and critical thinking to solve problems, and (7) Use collaboration and group processes to achieve a common goal. The institutional learning outcomes are mapped to the Bachelor of Science in Accountancy Six Program Learning Outcomes: (1) Use information technologies and computerized accounting software for financial accounting and reporting, (2) Apply generally accepted accounting principles to measure and report information related to accounting for the assets, liabilities, equities, revenues and expenses, and cash flows of business enterprises and governmental and not-for-profit entities, (3) Prepare tax returns and reports for individuals and business enterprises, (4) Interpret cost data and prepare managerial accounting reports, (5) Apply generally accepted auditing standards in the audit of public and private entities, (6) Apply ethical and legal concepts to accounting and tax related issues, (7) Demonstrate effective communication of accounting information (NU catalog, 2014). The mapping assures that the institutional learning outcomes and program learning outcomes are aligned and consistent with the mission of the university.

**Curriculum and Instruction:** The major in Accountancy program academically prepares students for a wide range of accounting-related careers, including public accounting, corporate accounting, internal auditing, accounting in not-for-profit organizations, and job opportunities with state and local government agencies such as the Internal Revenue Service, Defense Contract Audit Agency, FBI and others. All students are advised to contact a full-time accounting faculty member for a brief interview by phone or personal visit for the purpose of reviewing the student's career objectives. To serve the needs of students who are intending to take the CPA exams, the course content were designed following the American Institute of Accountants (AICPA) Content Specification Outlines (CSOs) (AICPA, 2009). Adjunct faculty hired are required to have at least a bachelor’s degree with major in accountancy, a master’s degree, and preferably with certifications such Certified Public Accountant (CPA) and/or Certified Management Accountant (CMA), or other certifications in the field of accountancy, as well as practice in the field of accounting. Full-time faculty are academically qualified (AQ) and or Professionally Qualified (PQ) as per guidelines from accrediting institutions such as the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC) and International Assembly for Collegiate Business Education (IACBE). The WASC accreditation 2013 Handbook describes the changing context for accreditation that rebalances the dual role that requires educational institutions to support both public accountability and institutional improvement. Universities are expected to be more accountable for student academic achievement, to be more transparent in their accreditations reporting, and to demonstrate their contribution to the public good. Accounting for quality is a matter of public trust considering the huge amount of financing provided by government to educational entities (WASC, 2013).

**Course Outline:** The course outline for the accounting courses in the Bachelor of Science in Accountancy follows a standard format. It consists of nine (9) pages that includes detailed information about the course such as the beginning and end
date, textbook information including the ISBN and link to the publishers’ supplementary materials, prerequisite for the course, contact information of the instructor (phone and e-mail), course description, course learning outcomes, course requirements specifying that the course requires three hours or more of study on a daily basis, the grading system that includes a variety of learning activities that will help students maximize their learning students. It also includes the websites of professional organizations, journals, and publications related to the accounting field.

**Grading Factors:** Graded learning activities are specified with assigned points to make students aware of the expectations for achieving success in the course. Points are designated for chatroom participation, homework assignments, threaded discussions, quizzes, research paper, practice CPA simulation problems, and Comprehensive Final Exam. The points are distributed approximately one third (1/3) for quizzes, and one third (1/3) for the comprehensive final exam, and one third (1/3) for the other graded activities. By providing a variety of learning activities, students are given the opportunity to determine in advance how he/she can be successful in the course.

**Synchronous Live Chats:** The university uses a technology that permits *application sharing* in which instructors can display on their computer screen virtually any software application, and have the students view the instructor’s screen while listening to the instructor’s oral presentation. Students can ask questions, provide clarifications, and can also present their papers or projects to the class. In a typical voice/visual learning environment, both the instructor and the students have headsets with microphones that enables the instructor and students to speak into their headset microphone and talk to each other as if in a regular onsite classroom. These two hour live class chat sessions are scheduled twice a week on Tuesday and Thursday or Monday and Wednesday or any two days that the instructor may decide to schedule, normally from 6:30PM to 8:30PM. Chat sessions are recorded and are accessible in the online course web site. For students having online live chats for the first time, an orientation is provided for free by the university.

There are eight chats in each course. Students are expected to participate in all eight chats. Students are encouraged to solve the assigned exercises, cases, or problems before the chat so that students are ready to participate and the chat will work out effectively and efficiently. Students who are unable to attend the live chat sessions can do a make-up by listening to the recorded chats and preparing a one to two page comprehensive summary of the missed chats. The make-up summary is to be submitted on the day immediately following the missed chat as an attachment to an e-mail to be sent to the instructor.

**Asynchronous Threaded Discussions:** In a *threaded discussions* activity, the instructors periodically post discussion questions, and students generally have a few days to post responses to the instructor and to interact to the responses of their classmates. This asynchronous interaction is particularly effective for questions that call for reflection and critical thinking. Online communication is text-based with interpretation of conceptual understanding contingent on the students’ ability
to express their ideas through typewritten messages. Assessing the quality of these messages is difficult and instructors often look at volume as an indicator of participation, rather than at cognitive presence or critical thinking. Threaded Discussion topics are uploaded in each of the four weeks. Students are required to make two postings at the minimum. The first posting is to answer the threaded discussion questions and the second as an interaction to another student’s posting (an argument, a comment, an explanation, or a disagreement). A mere “I agree or I disagree” or just a question will not be counted for grading. The Threaded Discussion (TD) grade is based on the quality of the contributions posted (at least 4 sentences for every post). The threaded discussions consist of cases on ethics, analysis of actual companies, and a practice on searching the FASB Codification.

Thiede (2012) stated that this is an effective strategy to encourage students to apply critical thinking analysis. In reviewing other students’ responses, thoughts and opinions, students can compare and contrast ideas, develop pros and cons relative to a case or issue, or take a stand with supporting rationales. Moreover, students can learn from reading the responses and reactions of others who have reviewed their assignments and papers.

**Homework Assignment:** Detailed homework (HW) assignments are included in the course outline with specification in terms of problems, exercises, cases, questions, and others. Weekly homework for the first three weeks is due on or before Saturday, 11:00 PM, PT. The final week’s homework is due on or before Friday, 11:00 PM, PT, due to Saturday being the final day of class. HW solutions are uploaded at 8:00 AM the following morning to give students the opportunity to review the solutions before taking the weekly quizzes. Homework are to be completed using Excel and submitted through the use of each weekly Homework Assignment DROPBOX and must be submitted with one file only. HW submitted after due date and time will have a 20% reduction in points. In fairness to all students, HW submitted after the solutions are posted (8:00 AM the following morning) will not receive points. The HWs are graded individually and the grade posted in the gradebook. Partial credits are awarded for incorrect answers with associated calculations on completed HW assignments.

Students are encouraged to exchange ideas, but the HW that is submitted to the faculty must be the individual work of the student. Homework submitted that appears to have been copied from another student or source will get zero points. Cheating or other forms of academic dishonesty may result in a failing grade.

**Research Project:** A writing assignment is required in every accounting class in consonance with the university’s goal of writing across the curriculum initiative. On the first week, students are requested to pick their research topics from those that will be covered in the particular course. There should be no duplication. Students make their choices on a “First Come, First Served” rule when posting their choice of topic. The assignment requires the use of the Library/Internet research to locate and study reference materials on current accounting related topics. This includes a four to five pages double spaced paper. The objective of
this activity is for students to be aware of what is happening in the real world that relates to accounting, to practice their writing skills, and make the study of accounting more meaningful. APA style is required for this assignment.

**Comprehensive Final Exam:** The Final Exam is scheduled on the last day of class. The Final Exam must be taken online and at the time specified to be fair to everyone and can be accessed for just one time. The exam is comprehensive (all chapters covered). The topics for the Final Exam are taken directly from the course learning outcomes shown on the course outline. The Final Exam is randomized. Phone numbers to call are provided in case of technical problems while taking the exam.

**Students End of Course Evaluation:** As part of the assessment process, an end of course evaluation is administered on the last week of the class starting on Monday and ending on Thursday for all classes for the particular month. Course evaluation results are reviewed by the program lead, the chair of the accounting department, and the dean. Instructors with scores lower than expectations are to be contacted by the program lead, the problematic areas are discussed and remedial measures or mentoring administered as appropriate to improve teaching performance and increase student satisfaction and success in the course.

**Faculty Support**

**Faculty training and Master Template:** Adjunct faculty hired are required to have at least a bachelor’s degree with major in accountancy, a master’s degree, and preferably with certifications such Certified Public Accountant (CPA)\ and or Certified Management Accountant (CMA), or other certifications, as well as practice in the field of accounting. Full-time faculty are academically qualified (AQ) and or Professionally Qualified (PQ) as per guidelines from accrediting institutions such as the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC) and International Assembly for Collegiate Business Education (IACBE).

New hires are provided extensive training. Instructors cannot be staffed with classes until after the rigorous training is completed. To maintain consistent content coverage for every class and to provide as a guide to instructors, master templates are developed for all the courses in the program and copied to each new class. One month before the start of class, the assigned instructor is provided access to the particular class. The instructor needs to review each and every item in the course shell, to update the content, the dates, and to make the class his/her own. The instructor prepares a comprehensive course outline following the sample provided in the master template, but is given the freedom to make modifications to suit the instructor’s teaching style. The course outline is reviewed and approved by the program lead before being distributed to students. The course outline if forwarded to the assistant to the dean for the school files. There are faculty meetings for adjunct faculty held four times a year: two onsite in San Diego and two online where expectations are discussed and best practices shared.

The WASC 2013 Handbook on Accreditation describes the changing context for accreditation that rebalances the dual role that requires educational institutions to support both public accountability and institutional improvement. Universities are
expected to be more accountable for student academic achievement, to be more transparent in their accreditations reporting, and to demonstrate their contribution to the public good. Accounting for quality is a matter of public trust considering the huge amount of financing provided by government to educational entities (WASC, 2013).

**Program Lead:** The program lead provides guidance and support to the instructors. After reviewing the end of course evaluations, the program lead calls the particular adjunct when the scores are below expectations and discuss with the instructors appropriate action to remedy problematic areas and work on strategies to improve teaching performance. Once a year, the instructor's class is observed by the program lead and advice and mentoring provided as necessary.

**Funds for Course Development:** The university wholeheartedly supports course development efforts. In the Program Assessment Review (PAR), the program lead specifies the expected activities for the improvement of the program and the courses together with the amount of funding needed. After approval, the amount needed are incorporated in the annual budgets for funding. Courses are continuously being monitored and modified to assure that the courses are current, the books are updated to the latest editions, and the course contents are relevant to the needs of students and employers in workplace.

**Full-time Faculty Development Fund:** To encourage scholarly activities, National University provides faculty development fund for full-time faculty members that covers registration fees for conferences, airfares, food, taxi fares, and supplies.

**Student Support**
A variety of support services provided the students to help them succeed in the courses they are taking that includes academic advisors, faculty advisors, student orientation tutorial service, career center, writing center, Math Online Tutor Lab, Library Resources and Services, and students concierge services. All of these services are intended to make the students life as convenient as possible. The concierge service, for example, is available 24/7.

**Evaluation and Assessment**

**Assessment:** The University Academic Assessment Committee (UAAC) is the coordinating body for assessment, and its membership includes representatives from each school, the vice president of the Office of Institutional Research and Assessment (OIRA), and the associate provost. The process of assessment of student learning is ongoing and integrated. The alignment between institutional learning outcomes, program learning outcomes, and course learning outcomes is understood to enhance this process. Focusing on program learning outcomes assessment provides faculty with a mechanism to assure that all graduates have a consistent body of knowledge. Feedback from assessment is used to adjust the learning environment and/or increase skills and knowledge of instructors and to identify areas that need improvement both in onsite and online courses. Accessibility of the new Accountability Management System (AMS) allowed for more ongoing assessment as well as discussion and conversations throughout the year (NU, 2010).
Responsibility for assessment: Faculty members are primarily responsible for the assessment of student learning. The administration works with the faculty to support the continuous improvement of student learning. This support consists of providing resources for faculty to engage in professional development about best practices in assessment, the promotion of two faculty members to devote time as assessment fellows, a dedicated Office of Institutional Research and Assessment, and annual events that commonly provide forums to enrich faculty knowledge on assessment practices. The major University-wide events include the Annual Assessment Summit, the Academic Assembly, and the Spring Symposium. These are in addition to monthly meetings held by the School Assessment Committees (SACs). The University Academic Assessment Committee (UAAC) is a coordinating body for all faculty initiatives on student learning assessment. There is a mandatory yearly Program Assessment Review (PAR) that covers one or two program learning outcomes assessed using two direct measures and two indirect measures followed by a comprehensive 5-year program review. External Reviewers are invited to do an independent appraisal of the programs whose comments are included in the overall recommendations. The direct measures are a combination of Comprehensive Exams and Research Projects/Cases given to all students at the end of the mastery courses. Indirect measures consist of Alumni survey send to graduates usually covering the previous three years and an exit survey administered to all students at the last course in the program. The results of the direct measures are analyzed and remedial measures recommended and if necessary request for funding for course developments are also incorporated for administrative approval and implementation.

CONCLUSIONS
Online learning offers the flexibility of time and space and capability of reaching a greater student population around the globe. While best practices vary in strategies and techniques, incorporation of best practices for online learning and teaching helps in providing students a more consistent, productive, and successful online experience. Engaging the students in a variety of learning experiences afford more opportunity for students to be actively engaged in the learning process and facilitate their successful completion of online classes. The various theories mentioned in this study point to the fact that successful online learners are students who are self-motivated, confident in themselves, and have a strong inner drive and determination to succeed. Students demonstrate more positive attitudes and higher level of performance when online classes are highly interactive. The emergence of modern technology has allowed students at all levels, young and mature, the opportunity to participate in advancing their education in an environment that is diversified, rich in best practices, yet progressive enough to allow students to proceed in a self-paced manner. Active learning, as opposed to passive learning, has become a key concept in the online classroom. As more universities offer flexible online courses, students who, because of location or commitments at work or at home, are unable to attend on-campus classes, will have
available in their online courses a learning environment that is comparable to the traditional face-to-face classroom experience.

REFERENCES


National University (2014), General Catalog.


STUDENT PERSPECTIVES OF PROFESSORS WITH A CERTIFIED PUBLIC ACCOUNTING (CPA) LICENSE COMPARED TO A PHD IN ACCOUNTING IN NEW YORK STATE

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Frimette Kass
Kessill Robinson
Brooklyn College of the City University of New York

ABSTRACT: This paper explored students’ perspectives of professors possessing a CPA (Certified Public Accountant) license coupled with professional experience compared to professors with a doctoral degree (PhD) in accounting with limited or no professional experience. The paper examined the above as it relates to potential career choices as well as classroom preferences. Do students prefer the professor with a PhD in accounting rather than a CPA license? Furthermore, this paper took into consideration the various changes the accounting profession is undergoing that may have influenced students’ perspective of their professors. It also examines furthering developments from The Pathways Commission on developing a national strategy for upcoming accounting students.

INTRODUCTION

Accounting professors have the awesome responsibility of preparing students to enter into the accounting profession. This is not an easy task as students who enter the accounting profession today encounter scenarios, accounting treatments, rules and regulations which require a great deal of preparation and understanding in order to meet the challenges as they arise. The question therefore arises as to which individual is better suited to be an accounting professor. This has long been debated and is still being debated in the academic as well as professional community. “Accounting is a practical profession. The preponderance of PhD’s do not have practical experience, but they do have textbook knowledge. The practical aspects of the profession that a student may encounter need to be taught by the practicing CPA” (Fischman, 2007). Therefore, the question arises as to whether students view the professor differently depending upon whether the professor holds a CPA license versus solely a PhD in accounting.

This research is pertinent because accounting students have a lot of challenges in adapting to the accounting profession, which is constantly changing. As a result, they need the best exposure to real world practice from their professors who are better able to bring the type of real world practical experience to the classroom.
BACKGROUND

Students might view their professors as resourceful based on whether they have a CPA license with professional experience, compared to professors with a PhD in accounting with no professional experience. This differentiation initially assists students in various ways. For example, students may get the opportunity to understand what the demand for accountants is in the job market from a CPA currently active in the profession. Secondly, students may get a clearer understanding of where in the accounting profession to focus their resources.

This research focused on obtaining an understanding of the important issues facing students and their view of professors as they make important decisions in their accounting careers. The relevance of this research may serve to provide one with a perspective of the profession, vis-à-vis academe, from students’ viewpoints, which at some point may foster an understanding of how best to balance the disparity between a student’s view of a professor with a CPA license compared to one possessing only a PhD.

PROBLEM STATEMENT

In recent years, there has been focused dialogue regarding the need to increase the number of accounting faculty holding PhD degrees in accounting. The March 2007 issue of The CPA Journal, Pursuing a PhD in accounting, PhD Shortage, reveals that, “from 2005 to 2008, the overall supply of new accounting PhDs will meet only 49.9% of the demand” (Noland et al., 2007). Moreover, the underrepresentation of PhDs in accounting programs shows that “supply of new PhDs specializing in audit and tax will meet only 22.8% and 27.1% needed in these disciplines, respectively” (Noland et al., 2007). There were several recommendations made to revise the downturn in the number of PhDs. Based on information presented, there is an issue in the accounting profession regarding students and professional advancement and enrollment in PhD programs. Furthermore, the concerns from 2007-08 compared to 2009-10 Trends in the Supply of Accounting Graduates and the Demand for Public Accounting Recruits shows that the Bachelor’s (BA) and Master’s (MA Acc; MBA Acc; MA Tax) programs increased 6%, compared to a 3% decrease in enrollment of PhD candidates from 2007-08 to 2009-10, represented in Figure 1. This shows that the enrollments and commitments to advance accounting programs are major concerns in the profession, which in turn, is evident in the low supply of new accounting PhDs.

The purpose of this research was to look at students’ views of professors with a CPA license coupled with professional experience compared to professors with a PhD in accounting with limited or no professional experience. Insight gained from such a study would be useful in understanding what students expect from professors based on the information gathered.
LITERATURE REVIEW

The 2011 Trends in the Supply of Accounting Graduates and the Demand for Public Accounting Recruits identifies key trends in accounting enrollment and graduation up until the 2009-10 academic year, as shown in Figure 1. Over a 10-year period, the accounting enrollment program increased approximately 46% overall. The Bachelor’s and Master’s programs enrollment from 2001-10 increased 46% compared to an increase of 33% in PhD program enrollment. Most recently, the 2007-08 compared to 2009-10 Trends in the Supply of Accounting Graduates and the Demand for Public Accounting Recruits showed that the margin of change from 2007-08 to 2009-10 for the Bachelor’s and Master’s programs increased 6%, compared to a 3% decrease in enrollment of PhD candidates during 2007-08 to 2009-10. Moreover, as presented in Figure 2, New Accounting Graduates Hired by CPA Firms reveals that the demand for new accounting graduates has continuously risen from 1971 to 2010. This provides an understanding that CPA firms are hiring at high rates at the Bachelor’s and Master’s level. For example, as reported by Figure 2, CPA firms have hired over 36,000 graduates at the Bachelor’s and Master’s level in 2007, over 25,000 in 2008, and 33,321 in 2010. This may have a directional relation to the shortage of PhD degrees.

Figure 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Total New Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>164,839</td>
</tr>
<tr>
<td>2001-02</td>
<td>168,630</td>
</tr>
<tr>
<td>2002-03</td>
<td>171,110</td>
</tr>
<tr>
<td>2003-04</td>
<td>202,568</td>
</tr>
<tr>
<td>2004-05</td>
<td>212,634</td>
</tr>
<tr>
<td>2005-06</td>
<td>224,319</td>
</tr>
</tbody>
</table>

Source: 2011 Trends In the Supply of Accounting Graduates and the Demand for Public Accounting Recruits
The shortage of PhDs in accounting is a major concern to the profession. Noland et al. stated that:

…the shortage of PhD-prepared professors in accounting has been exacerbated in recent years as older professors retire and fewer accounting professionals choose a career in academia. A 2005 study conducted by the American Accounting Association (AAA) and the Accounting Programs Leadership Group (APLG) estimated that, from 2005 to 2008, the overall supply of new accounting PhDs will meet only 49.9% of the demand. The study found that the supply of new PhDs specializing in audit and tax will meet only 22.8% and 27.1% needed in these disciplines, respectively (Noland et al., 2007).

Based on this information, it can be noted that there is a critical shortage of accounting PhDs. Furthermore, evidence shows that there has not been much increase of accounting doctoral candidates. For example, the Association to Advance Collegiate Schools of Business (AACSB) has shown that there is a steep decline in the number of PhDs being awarded in these subject areas. “The Doctoral Faculty Commission noted a 19% decline in the number of business research doctorates awarded between 1994-95 (1327) and 1999-2000 (1071)” (eNewsline, 2010).

Professors, who have various credentials and educational experience, influence accounting students through their daily interaction in the classrooms. One would understand that students might formulate a particular perception of their professors that in turn may influence their career decisions. Many students may see accounting as the practical discipline it is and direct their careers within public and private accounting as opposed to that of educators. Moreover, students in accounting classes are exposed to technical material in a vocation-focused way, disconnected from the complex real-world settings to which students are bound and from the research focused on understanding that setting (Rutherford, 2011). Linking learning experiences to both relevant practice and research would build skills and understanding for lifelong engagement in accounting practice and study. (The Pathways Commission, 2012)

This lead to several questions raised by The Pathways Commission. One question in particular posed by Bruce Behn, the Ergen Professor of Business at the University of Tennessee and chair of The Pathways Commission was, “How do we attract diverse talent and retain people through their career paths?” (The Pathways Commission, 2012). One would believe that this statement serves as
evidence that attracting and retaining students on the accounting career pathway as educators is a major challenge faced by the profession. The Pathways Commission has several recommendations in their July 2012 report:

Recommendation 1: Build a learned profession for the future by purposeful integration of accounting research, education, and practice for students, accounting practitioners, and educators.

Recommendation 2: Develop mechanisms to meet future demand for faculty by unlocking doctoral education via flexible pedagogies in existing programs and by exploring alternative pathways to terminal degrees that align with institutional missions and accounting education and research goals.

Recommendation 3: Reform accounting education so that teaching is respected and rewarded as a critical component in achieving each institution’s mission.

Recommendation 4: Develop curriculum models, engaging learning resources, and mechanisms for easily sharing them as well as enhancing faculty development opportunities in support of sustaining a robust curriculum.

Recommendation 5: Improve the ability to attract high-potential, diverse entrants into the profession.

Recommendation 6: Create mechanisms for collecting, analyzing, and disseminating information about the current and future markets for accounting professionals and accounting faculty.

Recommendation 7: Convert thought to action by establishing an implementation process to address these and future recommendations by creating structures and mechanisms to transition accounting change efforts from episodic events to a more continuous, sustainable process.

(The Pathways Commission, 2012)

The critical shortage of research-active, tenure-track PhD accounting faculty members, especially in the audit, systems, and tax specialties, is well documented. This shortage has serious immediate and long-term consequences for both the quality and viability of accounting education and accounting research.

**RESEARCH QUESTIONS**

This study has four primary research questions that are central to this paper:

Q1. How do students perceive the PhD in accounting program as it relates to being a professor or the practice of accounting?
Q2. Do students perceive practical experience to be the equivalent to a PhD?
Q3. Do students rather their professor possess a PhD in accounting rather than a CPA license?
Q4. What degrees/licenses, if any, are students expecting their professor to obtain in order for them to be teaching?

Due to the fact that this research is exploratory in nature, we have not formed any hypotheses.

**RESEARCH METHODS**

This research uses the survey method which was prepared using the methods described by Dillman and Salant (Dillman; Salant and Dillman). During the first summer 2012 term, a pilot survey was prepared to capture the students’ view of professors with particular credentials, which was extended to several groups. This survey was then revised and distributed to all students in accounting courses (both graduate and undergraduate) during the fall 2012 term. Our sample is limited to accountancy students in a large urban public college located in New York City.

**RESULTS**

The data collected was treated and analyzed using the SPSS statistical software package. Descriptive statistics follow:

1. The survey instrument was distributed to a variety of accounting classes at a large (approximately 16,500 enrolled students) urban public college. Approximately 1,200 students are declared accounting majors. Four hundred and twenty-three (423) usable surveys were returned. Forty-eight percent (n=203) were men and 52% (n=220) were women. The average age of the students was 26 (n=422, s.d.=4.845). Forty-four percent (n=236) reported being native English speakers and 56.1% (n=236) were not. Various Chinese dialects was the most common second language (n=65) and Russian was the third most common (n=47). Figure 3 shows the distribution students’ level of study.

<table>
<thead>
<tr>
<th></th>
<th>Full time</th>
<th>Part time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td>340</td>
<td>40</td>
<td>380</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td>27</td>
<td>26</td>
<td>53</td>
</tr>
<tr>
<td><strong>Post-graduate</strong></td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>368</td>
<td>70</td>
<td>438*</td>
</tr>
</tbody>
</table>

*Some students considered themselves in more than one category.

2. Further information gathered from the descriptive demographic statistic showed that 171 students said that they planned to terminate their education at the Bachelor’s level, 227 at the Master’s level and 22 planned to continue on for a PhD. Fifteen (n=60) said they are considering an academic career.
3. Very few of the respondents reported currently being employed as accountants. Fifteen reported being juniors, 13 reported being seniors and 7 reported being managers. Three hundred and fifty-six (356) said they planned to take the CPA examination.

4. Students’ Perception of their Faculty. We asked students several questions about the credentials of their professors. When asked if a CPA license or PhD mattered, 77% (n=321) said it did not matter to them if their professor had a PhD and 23% (n= 96) said it did matter. Forty-five percent (n=192) said it did not matter if their professor had a CPA license and 53.2% (n=225) said a CPA license does matter. Fifty-eight percent (n=242) said their professors’ credentials mattered and 41.7% (n=173) did not care about the credentials of their professor.

When we asked the students to recall their best professor, 78.3% (n=331) said that professor was a CPA and 23.6% (n=100) said that professor was a PhD. Forty-three percent (n=180) said that their best professor had professional accounting experience.

We also asked students if practical experience was equivalent to a PhD. Fifty-six percent (n=239) of respondents strongly agreed or agreed that practical experience is equivalent to a PhD, 22.4% (n=94) had no opinion, and 20.7% (n=87) strongly disagreed or disagreed.

We also asked students if a CPA license is more valuable than a PhD for the practice of accounting. The results are presented in Figure 4. Overwhelmingly, students agreed that a CPA license was more important for the practice of accounting.

**Figure 4: Is a CPA more valuable than a PhD for practice of accounting?**

We asked students if a CPA license is more valuable than a PhD for teaching. Forty-eight percent (n=199) had no opinion, 29.6%
(n=123) strongly agreed or agreed that a CPA license was more valuable for teaching whereas 22.6% (n=94) disagreed or strongly disagreed.

The results were similar when we asked participants if a PhD should be required for being a professor. Thirty-two percent (n=135) strongly agreed or agreed, 38% (n=158) had no opinion and another 29.6% (n=128) disagreed or strongly disagreed. The results are presented in Figure 5.

**Figure 5: Should a PhD be required for being a professor?**

Here we see a more even distribution of opinion leading us to believe that students are more ambivalent about the need for a professor with a PhD.

We asked students if they believed passing the CPA examination should be required to teach accounting. Sixty-seven percent strongly agreed or agreed that a CPA license should be required to teach accounting.

When we asked students what credentials would make the better accounting professor, 7.8% (n=33) said a PhD but no CPA license, 63.8% said a CPA license and a Master’s and 7.1% (n=30) said only a CPA license. 15.1% said they didn’t care about their professors’ credentials as long as they could teach.

**CONCLUSIONS AND IMPLICATIONS FOR FURTHER RESEARCH**

Our findings suggest that most students believe that their professors’ credentials did not matter. Moreover, a high percentage disagreed or strongly disagreed that a PhD should be the requirement to become an accounting professor, and other students had no opinion. In addition, other students did not care about the professors’ credential as long as they could teach. However, they overwhelmingly said they believe an accounting professor should have passed the CPA
Examination. A significant amount of students will complete their accounting education at the Bachelor’s or Master’s level, and few will pursue a PhD in accounting. Reflected in the findings, a large amount of students said their best professor had a CPA license or a CPA license and a Master’s degree while others recalled that their best professors had only a PhD.

Based on the findings, many students are not concerned about the professor’s credentials. A professor that has a CPA license who has professional experience or a professor with a PhD in accounting with limited or no professional experience are not perceived to have much influence on the students’ decision to further their studies in the accounting field.

Furthermore, our findings that most students believe that their professor’s credentials did not matter or, moreover, a high percentage disagreed or strongly disagreed that a PhD should be the requirement to become an accounting professor, aligns with the report conducted by The Pathways Commission. They believe they are “going well beyond this to develop in students an entry-level base of necessary professional skills…This educational responsibility has both curricular (what we teach) and pedagogical (how we teach) dimensions” (The Pathways Commission, 2012). Although the findings make clear that students are more concerned about how the professors teach, it also shows that many students are not concerned with the professor’s credentials. This may raise concerns for in-depth research to understand the main factors contributing to students not seeing the importance of the professor’s credentials. The findings also show that many students will terminate their accounting degree at the Bachelor’s or Master’s level. This could be due to other factors, for example, economic constraints or career opportunities presented to the students.

Another variable which may lead to further study is that this study was conducted at a large urban university in a New York City. Different results may be produced if this study was conducted in a different geographic location where the economic and demographic composition of the students vary.

Students may also believe it is in their economic interest to commence their careers as soon as possible, which may be a driving factor for students taking any opportunity presented to them. A 2005 study conducted by the American Accounting Association (AAA) and the Accounting Programs Leadership Group (APLG) estimated that, “from 2005 to 2008, the overall supply of new accounting PhDs will meet only 49.9% of the demand” (Noland et al., 2007). This problem is causing the accounting profession to explore new avenues of bridging the connection between the practical and academic community in order to remediate this shortage. “The answer can and perhaps be CPA+PhD, or CPA+Master’s. As in the medical profession, continued practice in the discipline being taught should be required” (Fischman, 2007).
REFERENCES


ABSTRACT: State incorporation laws require the board of directors to manage the affairs of the corporation. As a result of the delegation process, the board’s role begins to be defined with broad based responsibilities. Directors are not research scholars. As a result, they should seek training about analytical decision making to support the board’s deliberative process. This article presents a concept for training corporate directors to become more effective in their work routine. The Committee on Corporate Laws of the American Bar Association has developed the Model Business Corporation Act. The Model Act is used to include the general legal concepts and standards that apply to directors of all business corporations. The specifications of the Model Act pertaining to directors are spelled out in the sixth edition of the Corporate Director’s Guidebook, published by the American Bar Association. A careful review of the Guidebook was undertaken to interpret the directors’ work into broad based rules.

BOARD OF DIRECTORS IN SMALL FIRMS

The boards of directors may be particularly important in the governance of a small firm. Due to their size, small businesses have a limited number of employees and often depend substantially on the entrepreneur for decision making (Daily & Dollinger, 1992; Feltham, Feltham & Barnett, 2005). The board of directors can provide another source of knowledge and insight beyond that of the entrepreneur that can aid in decision-making.

The roles that boards of directors play can be classified into two major roles: oversight and decision-making (ABA, 2011; Van den Heuvel, Van Gils & Voordeckers, 2006). The oversight role involves legal compliance, determining managerial compensation and evaluating management performance. The oversight role is particularly important in large publically traded corporations, where there is a substantial separation of ownership and control and as a result agency problems may arise (Berle & Means, 1932; Jensen & Meckling, 1976). Even certain small firms may have some degree of separation of ownership and control, especially if outside equity capital is obtained to fund the growth of the business. In such a scenario, outside equity investors may come to own a substantial share of the business. In their oversight role, the board of directors ensures that the entrepreneur is acting in the interest of all the shareholders, and not just in their own self-interest. Even in small firms where ownership and control are not separated (the entrepreneur has total ownership), the oversight role
provided by the board of directors may still be important, particularly when the entrepreneur is unfamiliar with the relevant legal issues the business faces.

The other role of the board of directors is decision-making, which involves networking and maintaining relationships with external parties, advising managers, and formulating strategy (ABA, 2011; Van den Heuvel et al., 2006). This may be particularly important for small firms since the entrepreneur may be focused on the day-to-day operations of the business, not long-term planning. The board of directors may help by bringing increased discipline and a more formal planning processes (Johannisson & Huse, 2000).

Boards of directors for small firms often contain a number of insiders, or individuals that have either a personal or professional relationship with the entrepreneur (Corbetta & Salvato, 2004). There has been some debate regarding whether small firms should have board of directors made up of insiders or whether having outsider directors can be more beneficial. Insiders may have a level of knowledge about the business that outside directors may not have (Ford, 1988). However, having outsiders on the board of directors has been shown to lead to more effective monitoring of firm management (Corbetta & Salvato, 2004), more inclination to undertake substantial changes (Brunninge, Nordqvist & Wiklund, 2007) and better firm performance (Schwartz & Barnes, 1991). Boards of directors for small firms can also vary with regards to how active they are. Some entrepreneurs simply set up a board of directors to meet legal requirements, and may select directors that will simply “rubber stamp” their decisions. Other small firms have a more active directorate, and this is especially true for those obtaining equity capital from angel investors or venture capitalists. Having a more active board of directors has been associated with higher firm performance in small firms (Fried, Bruton & Hisrich, 1998), indicating that an active directorate can be a valuable resource for them.

The Macro Perspective

From a macro perspective, corporate governance can impact the nation’s financial stability, which in turn, will affect its economic performance. Society must be able to rely on directors to be true stewards of corporate governance. They must define a philosophy and culture of ethics to guide corporate management that will permeate businesses, society and culture. By making a strong commitment to ethics, accountability and shareholder interests, boards will gain and strengthen investor confidence in society’s business institutions. On a macro perspective, it is this confidence that will help build a stronger economy (Sherony, 2007).

The Micro Perspective

The Sixth Edition of the Corporate Director's Guidebook, published by the American Bar Association is the most frequently cited handbook for board members. (American Bar Association, 2011). Since its initial publication in 1978, directors, business executives, advisors, students of corporate governance, and
others have all come to rely on its advice. It defines the board’s role as the following:

Directors have a responsibility to act in the best interests of the corporation and its shareholders. To do so, they must focus on maximizing the value of the corporation for the benefit of its shareholders. Directors fulfill this responsibility through two primary board functions: decision-making and oversight. The board's decision-making function generally involves considering and, if warranted, approving corporate policy and strategic goals and taking specific actions such as evaluating and selecting top management, approving major expenditures and transactions, and acquiring and disposing of material assets. The board's oversight function involves monitoring the corporation's business and affairs including, for example, financial performance, management performance, compliance with legal obligations and corporate policies, and evaluating appropriate risk management structures. Both functions require that directors develop an understanding of the corporation’s business and the environment in which it operates, including the risks and opportunities it faces, and management's capacity to run the business while managing risks. In addition, directors need to ensure that they have sufficient information to engage in informed decision-making and oversight (ABA, 2011).

The duties and responsibilities statements published by the American Bar Association have been analyzed and developed into logical rules to provide broad based guidelines needed to learn the role of directing and to properly perform board duties. Some duties are imposed by historical precedent; others are imposed by law. The following table provides a framework of board work interpreted in rules. Each rule is applied to the director’s duties mentioned in the Guidebook. These rules and broad based duties underlie a common framework of director requirements and obligations.

### BOARD RULES

<table>
<thead>
<tr>
<th>RULES OF THE BOARD</th>
<th>The Duty of Fiduciary</th>
<th>The Duty of Care and Skill</th>
<th>The Duty of Good Faith</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Business Judgment Rule</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Reasonable Director Rule</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The Personal Affairs Rule</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**The Business Judgment Rule**

Directors are expected to act with intelligence, be well informed, and act with good faith and honesty in taking actions to protect the assets of others. The business judgment rule implies a standard of fiduciary in safeguarding the assets of others and in improving company performance.
Tomorrow’s director will need to apply mature business judgment to the issues facing them. The acceptance of this obligation creates a level of responsibility that fulfills the process of delegation of authority to the board that is vested in law.

**Business Judgment Requires the Duty of Fiduciary**

The director occupies a fiduciary relationship to shareholders in regard to their investments in stocks. Hence, they must be very careful not to profit by the use of information obtained as a result of their position. The rule requires directors’ to become familiar with the businesses they direct:

1. The competitive environment within which the business operates.
2. The key drivers that account for profitability and cash flow.
3. The core businesses and profit drivers of each.
4. Strategic, operational, and financial plans of the corporation.
5. Goals and objectives.
6. Economic and competitive risks.
7. Risks to physical assets, intellectual property and personnel.
8. The ongoing financial condition of the corporation and its operations.
9. The performance of the corporation’s business segments as compared to competitors.
10. The degree of achievement of board-approved objectives and plans.
11. Segmented breakdown of financial information for each division or segment.
12. Systems of internal controls that provide reasonable assurance of compliance with the law and corporate policies.
13. Material risk and liability contingencies, including litigation and regulatory matters. *(ABA, 2011)*

To execute the American Bar Association tasks, directors’ need to make management aware that a critical watch is being kept over the institution’s direction. It also requires that trustees have a level of information and advice sufficient to make their criticism penetrating and meaningful. Further, a healthy tension must always exist between belief in the current status quo of the institution and the urge to question and criticize management. Lastly, there must evolve a feeling possessed by directors of an authority role, freedom to make expressions and suggestions, to ask questions and require information from managers.

Evidence from the Corporate Directors Guidebook suggests that directors must act as a fiduciary in applying mature business judgment to the companies that they direct. A director occupies a fiduciary relation to the corporation owners (shareholders) and must exercise care to respect their interest. It is control over another’s property that imposes upon the director a fiduciary obligation which requires mature business judgment.
The Reasonable Director Rule

Directors must be capable of sound thinking that develops reasons to bring about the most optimal decision to the issues facing them. Evidence, bits of data, opinions, inference, good judgment and argumentation are all properties that help to engage reasonableness.

Reasonableness Requires the Duty of Care and Skill

Directors’ duties must be undertaken with the care that a person in a like position would reasonably believe appropriate under similar circumstances. An adequate time commitment is necessary to be careful and skillful. Participation in both board meetings and committee meetings would be a necessary condition to becoming careful and skillful. Accurate and timely information is also a necessary condition of being careful and skillful.

Directors must exercise a high degree of care, skill and diligence in managing the affairs of the company. Care and skill involves a high degree of business prudence, which is the skillful judgment used in the management of business affairs.

Directors’ actions must be in the best interest of the corporation. Directors should not act in their personal interest or in the interest of another person. Further, they should be careful to disclose conflicts of interest situations. Directors must act honestly, fairly and in good faith in carrying out their duties.

The Personal Affairs Rule

Directors must act in good faith, as if they are administering their personal affairs. The duty of good faith requires that a director acts with fidelity and loyalty. The directors have to believe that they are honestly doing what is right and are behaving as honest people in business are expected to act.

A director must not place himself or herself in a situation which conflicts with their duty to act bona fide for the benefit of the company for which they are a director. Good faith then is loyalty and trust. It requires that the director does not gain personally at the expense of employees, shareholders or others.

Personal Affairs Requires the Duty of Good Faith

The following guidelines can aid directors toward acting in good faith (Sherony, 2007).

Charitable

1. Coaching and mentoring managers to perform tasks effectively.
2. Impart new initiatives into the business that they direct.
3. Have an innate desire to give the institution, program, or departments more than they will take from it.

Patience
1. Nudge managers little-by-little.
2. Induce colleagues to come aboard and join the plan and vision.
3. Don’t rely on luck to any great extent.

**Humility**
1. Admit errors.
2. Seek criticism.

**Values**
1. Fight for your values.
2. Don’t cheat the system a little.
3. Display integrity: it’s a journey.
4. Accept responsibility.

**Contentedness**
1. Display a positive attitude.
2. Savor the moment of struggle.
3. Find happiness in managing drudgery.
4. Learn to suffer today for a better tomorrow.

**CONCLUSIONS**

The authors propose that the directors’ duties of fiduciary, care and skill and good faith can be fulfilled with an in-depth knowledge of three rules: the business judgment rule, the personal affairs rule and the reasonable director rule. These three rules require memory, imagination and intelligence. Careful analysis is given to each requirement to enhance the possibility of applying and practicing the three rules.

**The Memory Requirement**

It is from seasoned experiences that directors must recall those events where their thoughts are translated into efforts that actually improved performance somewhere along the path of their lives. For most successful people, there were many trials and a few successes. They should teach themselves to be delighted when they struggled to correct the defects in their own character and fought to overcome any sense of discouragement.

It is the successes that can be recalled and written down. The expectation of using recall for successful past activities conditions the director to organize and group important past events. These lessons can be dwelled upon to teach and condition the director to bring them about once again. Past successes need to be recorded and boxed into their time duration. The recall should identify the mobilization of the resources and how their input and energy was harnessed to bring about a positive result. The resources committed should be correlated with the event’s life cycle. Dwelling on the attempts that failed should be avoided.
Being a director means guiding management to succeed in achieving goals and objectives and producing value as a result of the process.

**The Imagination Requirement.**

Good directors are those with an intense interest in life and want to better and improve the institutions that they direct. The directors’ sensations are used to develop imaginative properties of concepts. To imagine is to produce the mental imagery that rules over nature. It is the capacity of their intellect to see pictures. It is this imagery that orients the director into a functional relationship in the real world. It is a power and a skill. It begins from a real situation. It ends with its capacity to take mental pictures that represent improved performance of a strategy in a situation.

It is wise directors who are able sense improvements, new directions and strategies that will bring about success. Some imaginative imagery is prohibited, such as passing on inside information that they know of so one of their colleagues can benefit. Other imaginative imagery is affirmative, such as imagining the expansion of business for which they are a board member through a new product strategy, an improved structure for meeting the company’s challenges or the improvement of procedures for streamlining job tasks.

**The Intelligence Requirement**

Directors are a special group of people who have the right to develop and institute great ideas into a company setting. When they approach a board meeting, this is the choice they face. Such ideas have an equal probability of gaining strength to produce value or of decaying. They must be careful not to stifle them. Good ideas must be conditioned and worked with and be given a range of opportunities to achieve success.

Intelligence applied to a situation will concentrate on the tasks at hand that need to be addressed with wisdom and enlightened critical thinking. Solutions to issues are going to be gleaned from the director’s introspective capabilities. They have to gain control over sensitivity, memory, whims, impulses and imagination. They also have to put aside useless thoughts and incentives. They do not allow their insights to wander uncontrollably. They must think in a sober and temperate manner.

Using intelligence to evolve great ideas requires patience, humbleness, trust and a fascination with the activities of the company they are directing. Their role on the board should be a dynamic of immersion requiring reflection, meditation, and contemplation. They must remain open to a new revelation of a solution.

analysis to classify eleven board task into two major roles- control and service. These are similar to the roles of oversight and decision-making as specified by the ABA (2011).

REFERENCES


USING ONLINE HOMEWORK TO IMPROVE EXAM SCORES

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James E. DeFranceschi  
Eric Knight  
Southeastern Louisiana University

ABSTRACT: At a regional university in the southeastern United States, students are required to work online accounting homework assignments in the beginning Financial Accounting and Managerial Accounting courses using a publisher’s software. Students can earn up to 50 points (plus the possibility of eight bonus points) for their work. This represents ten percent of the course grade (50 points out of a maximum of 500 points.) For most students, these assignments improve their overall course average because their percentage score on the homework assignments exceeds their exam score average.

Although the overall course grade is improved, the purpose of this research is to determine whether completing the assignments actually improves exam scores. In other words, does the learning that takes place in doing the homework problems result in better exam grades? The study was conducted by applying a t-test to the means of exam scores of those students who earned at least 70% on the online homework with the means of the exam scores of those students who earned less than 70%. This was done for students enrolled in each of the two courses in Spring 2011, Fall 2011, and Spring 2012.

The results show that the mean exam scores of those students in Financial Accounting and in Managerial Accounting who earned at least 70% on the online assignments were statistically significantly higher than the mean of exam scores of those students who earned less than 70%.

INTRODUCTION

The software used for the online homework is provided by the publisher of the text used in the course. Each student pays a nominal fee to the publisher for access to the software. The online homework weights 10% of the final course grade, that is, 50 points out of 500 points. Students have three attempts to obtain a correct answer to a specific exercise. However, a correct answer on the third try receives only 50% credit. For example, a one-point exercise would be graded as .5 if answered correctly on the third attempt.

For the semesters included in this study, students were required to complete the online homework assignments for a specific chapter no later than the morning of the beginning of the next chapter. For example, if the instructor completed class lecture and discussion for Chapter 6 on Thursday and began lecture on Chapter 7...
the following Tuesday, the assignments for Chapter 6 were due no later than a specific time, such as 8:00 a.m., on Tuesday morning. However, the authors have completed other research that shows that the timing of due dates for such assignments does not affect the test scores. Consequently, the authors now set the due date as the morning of the exam over which the assignments are included. For example, an instructor may cover Chapters 6, 7, and 8 over a three-week period with an exam over all three chapters on the class day following completion of Chapter 8. The due date for all three chapters would be the morning of the exam. Therefore, a student may complete any portion of the assignments for those three chapters at anytime during that three-week period, including completing all three chapters the night before the exam.

The online homework assignments mirror the text exercises that are assigned for class illustration and discussion. An example of an exercise from the text for the Managerial Accounting course is as follows:

Glacial Co. estimates that variable costs will be 62.5% of sales, and fixed costs will total $600,000. The selling price of the product is $4.

Required: Calculate the break-even point in units and in dollars.

The online assignment replicates the text exercises, but use the numbers 60%, $561,000, and $3, respectively, rather than the ones shown above. Depending on the chapter, students are usually assigned four or five exercises per chapter.

PREVIOUS STUDIES

The authors found no literature specifically on this topic as it relates to accounting education. Curtis (2011) commented that accounting education literature is almost devoid of any work related to formative assessment, which she defines as feedback to instructors and students that will improve learning. The use of online homework assignments as implemented by the authors in this study would appear to meet that definition. Therefore, the results of this study contributes to the literature in the area of her concern.

The authors did find similar research in the area of economics. Johnson and McKenzie (2013) found that an online system of exercises in a microeconomics course had been beneficial to their students and that an increased level of effort using the tools provided in the online program could significantly improve exam scores.

Gutarts and Bains (2010) found that two components of homework, motivation and feedback, are strong indicators of enhanced student achievement and performance. Although their study related to homework in general, not necessarily computer-based, the online assignments required by the authors of this study did provide motivation, in that they were graded, and also provided immediate online feedback.

There are a number of studies that compare web-based homework with paper-based homework. Cutshall and Bland (2011) found that in an introductory finance
course 60 percent of the students found that web-based homework problems aided their understanding of the course material. However, 32% did not prefer web-based homework over paper-based homework. Cutshall, Bland, and Mollick (2012) state that students found value in web-based homework in an undergraduate business statistics course through the immediate feedback that was provided for each homework problem. They also thought that the web-based homework and feedback was useful to their understanding of the material. “Immediate feedback” is an important factor cited above by Gutarts and Bains. Mendicino, Razzaq, and Heffernan (2009) compared learning for fifth grade students in a math class. They found that students learned significantly more when given computer feedback than when doing traditional paper-and-pencil homework problems. Contrary to the above cited studies, however, Palocsay and Stevens (2008), compared traditional textbook-based homework assignments with three systems of web-based homework and found that the technique used to deliver homework makes little difference in student success.

Morgan (2013) commented on the fact that because the use of homework management systems is relatively new, little research has been done on their effectiveness. She did not actually do research testing the effect of a specific system, but rather provided a model with which accounting educators can measure the factors that motivate student to use an online homework management system and measure its effectiveness.

PURPOSE OF THE STUDY

It is important to recognize that students whose average online homework grades are higher than their test grades will improve their overall course average. For example the average exam grades and homework grades for one of the authors in one of the semesters included in the study are shown in Table 1.

<table>
<thead>
<tr>
<th>Exam No.</th>
<th>Exam Grade</th>
<th>Homework Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>71.1%</td>
<td>92.4%</td>
</tr>
<tr>
<td>2</td>
<td>73.3%</td>
<td>85.4%</td>
</tr>
<tr>
<td>3</td>
<td>73.7%</td>
<td>85.6%</td>
</tr>
<tr>
<td>4</td>
<td>70.3%</td>
<td>84.2%</td>
</tr>
</tbody>
</table>

As mentioned above, the homework constitutes 10% of the final course grade. Therefore, the table shows that the homework would raise the overall course grade
average. However, for a specific student, it may or may not raise the numerical average enough to increase the course letter grade. The authors recognize that the course grade can be enhanced if a student successfully completes the homework. However, the purpose of this study is to determine whether or not successful completion of the homework improves scores on the exams. This results in the following hypothesis:

The mean of exam scores for students who score at least 70% on the online homework assignments will be significantly greater than the mean of exam scores of students who score less than 70% on the online homework assignments.

METHODOLOGY

As indicated above, the study was conducted over three semesters for a course in Financial Accounting and a course in Managerial Accounting. The population for the study for Financial Accounting is shown in Table 2.

<table>
<thead>
<tr>
<th>Sections</th>
<th>Number of</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor 2</td>
<td>3</td>
<td>77</td>
</tr>
<tr>
<td>Instructor 3</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>175</td>
</tr>
</tbody>
</table>

The population for the study for Managerial Accounting is shown in Table 3.

<table>
<thead>
<tr>
<th>Sections</th>
<th>Number of</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor 1</td>
<td>4</td>
<td>76</td>
</tr>
<tr>
<td>Instructor 2</td>
<td>9</td>
<td>143</td>
</tr>
<tr>
<td>Instructor 3</td>
<td>8</td>
<td>180</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>399</td>
</tr>
</tbody>
</table>

For each course, the authors calculated the mean of the sum of the four exam scores of all students who earned a minimum of 70% on the online homework assignments. They also calculated the mean of exam scores of students who earned less than 70% on the online homework assignments. They next applied a t-test to the array of the mean of the four exam scores for each category.
The results of these tests for Financial Accounting are shown in Table 4.

<table>
<thead>
<tr>
<th>Online Homework Scores</th>
<th>70%+</th>
<th>&lt;70%</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>124</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Exam Mean:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Score</td>
<td>278.7</td>
<td>247.7</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Percent</td>
<td>69.8%</td>
<td>62.0%</td>
<td></td>
</tr>
</tbody>
</table>

The results of the tests for Managerial Accounting are shown in Table 5.

<table>
<thead>
<tr>
<th>Online Homework Scores</th>
<th>70%+</th>
<th>&lt;70%</th>
<th>p-value</th>
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<tbody>
<tr>
<td>N</td>
<td>257</td>
<td>142</td>
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<tr>
<td>Exam Mean:</td>
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<tr>
<td>Score</td>
<td>296.1</td>
<td>274.0</td>
<td>&lt;.01</td>
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<tr>
<td>Percent</td>
<td>74.0%</td>
<td>68.5%</td>
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</table>

CONCLUSION

The results show that the hypothesis is valid. Specifically, those students who scored 70% or greater on the online homework assignments earned significantly higher grades on the examinations. The p-value level of significance was less than .01. This was true for both the Financial Accounting course and the Managerial Accounting course.

As previously stated, and illustrated above in Table 1, students will generally improve their overall average in a course if they complete graded online homework assignments. However, the primary purpose of the online assignments is not to provide additional course points, but rather to enhance student learning of the subject matter. To the extent that exams do, in fact, indicate the level of student learning in a course, this study shows that students who successfully complete online homework assignments, with “success” defined as a grade of at least 70%, will improve their exam scores. Consequently, the authors conclude that accounting instructors should seriously consider using online homework assignments in those courses in which such assignments are feasible and appropriate for the course.
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APPRECIATIVE INQUIRY AS A MODEL FOR ASSESSING THE VALUE OF BUSINESS SCHOOL EDUCATION

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ABSTRACT

The Appreciative Inquiry (AI) model is based on the assumption that the questions we ask will tend to focus our attention in a particular direction. Instead of asking “What is the problem?” which AI argues maintains a basis of deficiency, AI takes the alternative approach. As a self-defined asset-based approach, AI starts with the belief that every organization, and every person in that organization, has positive aspects that can be built upon. It asks questions like “What is working well?” “What is good about what you are currently doing?” Cooperider, Whitney, and Stravos (2008) explain that the outcome of an AI initiative is a long-term positive change in the organization. They assert that AI is important because it works to bring the whole organization together to build upon its positive core. The AI strategic framework is ideal for leaders within the higher educational arena called upon to assess the value of business school education. One of the most common areas utilized to assess the value of a business school education is student learning. The focus of the present research is to discuss current methods and challenges associated with assessing student learning within business school education. AI will be highlighted as an alternative method for assessing the value of the business school education reflected through student learning.

INTRODUCTION

With increasing pressure for accountability from a multitude of stakeholders, business schools are being challenged to provide direct and systematic evidence of student learning. In 2003, the American Association of Collegiate Schools of Business (AACSB) passed Assurance of Learning (AoL) Standards requiring business schools to respond directly by proving that their students are learning. For 2007 and beyond, the AACSB stated that schools should be demonstrating a high degree of maturity in terms of delineation of clear learning goals, implementation of outcome assessment processes, and demonstrated use of assessment information to improve curricula (Rubin and Martell, 2009). Such evidence would ultimately point to the true value of business school education. Currently, it is common practice for business schools to document the quality of their teaching, student learning, and curriculum via a matrix focused on demonstrating how their business curriculum aligns with the topics and skill
development that the AACSB considers mandatory. Many business schools rely heavily on proxy data from students, alumni, and employers to further document the quality of their programs. The range of assessment methods is vast. Given the many challenges associated with current methods of assessment, the present research presents Appreciative Inquiry as an alternative, innovative approach to assess the effectiveness of student learning and the overall value of business school education.

**CHALLENGES OF ASSESSMENT**

One of the major challenges related to assessing business school educational value and student learning is helping faculty understand the true purpose of the assessment process. Pringle and Michel (2007) discuss the fact that some faculty are apprehensive and assume that program assessment data will be used to evaluate their teaching or second-guess their grading. Additional challenges are present within institutions who utilize the assessment process as a means to compare one educational institution to another. In his comprehensive analysis of the status of student learning assessment, Volkwein (2003) noted that faculty are more enthusiastic about assessment when they are fully engaged. Volkwein further discussed the challenges many institutions face regarding the limited knowledge faculty have regarding the effects of the use of assessment data.

An ongoing challenge facing many schools is providing the right form of evidence. Indirect and direct are the two standard methods for assessing student learning. Indirect methods of assessing student learning include processes such as focus groups and exit interviews, whereas direct methods include course embedded exams and/or case studies. The challenge of gathering evidence on student learning through direct measures is considerably more complex and administratively taxing than through the indirect measures which were standard prior to 2003. Aside from the administrative burdens that are synonymous with assessing student learning, business school faculty and administrators often lack tools and training needed to conduct adequate assessments.

**CATEGORIES OF ASSESSMENT**

The standard categories of assessment include cognitive learning outcomes; skill-based learning outcomes; and affective learning outcomes. Rubin and Martell (2009) summarize the classification of assessment of learning outcomes. The assessment method selection process can be simplified by classification schemes. Rubin and Martell (2009) assert that the best approach is to utilize multiple methods of indirect and direct assessment. The method measuring or capturing learning outcomes identifies the what of which will be measured. This is separate from how it will be measured; not to be confused with the assessment criteria. Table 1 is illustrative rather than exhaustive.
### Table 1
Source: Rubin and Martell (2009)

#### APPRECIATIVE INQUIRY AS A METHOD OF ASSESSMENT

Appreciative Inquiry (AI) is discussed as an alternative and innovative method of indirect assessment. Firmly grounded in social constructionist theory (Gergen, 2009), AI emerged out the Department of Organizational Behavior (OB) at Case Western Reserve University in Cleveland Ohio. The original method of AI called for a collective discovery process using grounded observation to identify the best of what is. It also focused on vision and logic to identify ideals of what might be, collaborative dialogue and choice to achieve consent about what should be, and
collective experimentation to discover what can be. In 1997, the 4D model of AI, now universally described as the AI method was created. The 4D model includes four processes; discover, dream, design, and deliver. The present research focuses on the utilization of the AI 4D model as a method for assessing student learning and value of business school education.

**Discovery:** In the discovery stage, participants (i.e. students) reflect on and discuss the best of what is concerning the object of inquiry. The object of inquiry would ideally be the value of their business school educational experience as reflected through the assessment their student learning. The business school education participants could be expanded within this discovery phase to include other stakeholders within the indirect measurement process including faculty, administrators, and employers. This discovery stage is also known as the “positive core” (Cooperrider and Whitney, 2001), where an attempt is made to catalogue the signature strengths. For example, students might share their best experiences as students within the classroom and business degree program. Interviewers and interviewees fully engage in the act of inquiry itself (Carter and Johnson, 1999).

**Dream:** During this stage, stakeholders are asked to imagine their group at its best and identify the common aspirations of the system members and to symbolize this in some way. Similar to the discovery stage, stakeholders would include students, faculty, employers and other participants within the system. The dream phase often results in something more symbolic, like a graphical representation. During the dream phase, the interview stories and insights get put to constructive use. As people are brought together to listen carefully to the innovations and moments of the organization alive, sometimes in storytelling modes, sometimes in interpretive and analytic modes, a convergence zone is created where the future begins to be discerned in the form of visible patterns interwoven into the texture of the actual (Liebler, 1997). Some organizations turn the data into a special commemorative report celebrating the successes and exceptional moments in the life of the organization. Others have created a thematic analysis focused on documenting rich stories without one line quotes. In all cases, the data gathered from the dream phase serves as an essential resource and foundation for positive organizational change.

**Design:** The design phase of AI is a time for the creation of new forms, new containers, new practices and even new directions. Design brings to life a dream and supporting conversations needed to evolve it. Design draws on the power of dreams to inform the co-construction of overall design principles and then engages the people actually doing the work of the organization in inventing new social architectures. With a common dream in place, participants are asked to develop concrete proposals for the new or ideal group state (Bushe, 2011). Cooperrider called these “provocative propositions” – a phrase sill utilized in some models. Within this stage, for example, students and all stakeholders would develop a specific proposal within a specific category and be instrumental in the evolutionary process of change and improvement within the business school.

**Delivery/Destiny:** This fourth and final stage of the AI 4D model is similar to the change management stage of traditional change management. The purpose of
the delivery/destiny phase is to co-construct a sustainable preferred future, embracing innovation at many levels. Techniques associated with this final phase include self-organized groups formed to implement the design statement. Cooperrider, Whitney, and Stavros (2008) explain that this phase involves neither prioritization of needs nor an imposed sequence of concerns. Instead, people who are passionate about implementing a particular aspect of the design step forward and join with like-spirited collaborators. It is a time of continuous organizational learning, adjustment, and improvisation.

Exactly what ought to happen in this phase has provoked the most confusion and the least consensus amongst AI advocates. Cooperrider (1999) and others caution that using the outcomes of design to fill in gaps, or create new targets and objectives is counter to the very philosophy of appreciative inquiry. In this phase, widespread agreement for the design statements are sought, and an event is orchestrated where stakeholders make self-chosen, personal commitments to take action consistent with any design element. Leadership makes clear that there will be no action plans or committees – instead, everyone is authorized to take those actions they believe will help bring the design to fruition (Bushe, 2011). Like the other phases, the delivery/destiny phase is systematic in terms of inspiring change and continuing dialogue. Overall, the goal of the delivery/destiny phase is to ensure that the dream can be realized. Ultimately this would be the dream of a more highly valued business school education for all stakeholders on a foundation of optimal student learning.

CONCLUSION

Assessment methods, regardless of how sophisticated or elaborate, contain imperfections. The AACSB explains that closing the loop is one of the key concerns that business schools have about assessment (Martell, 2007). This is defined as utilizing assessment outcomes toward the ongoing development of degree programs. To be successful at this step, programs need to present the data to stakeholders including department chairs, program coordinators, and deans, in a form that is sufficiently granular so that a set of actions can be developed. The recommendations need to be implemented and follow up is required to see if the implemented change actually made a difference. The standard categories of assessment discussed in the current research include cognitive learning outcomes; skill-based learning outcomes; and affective learning outcomes. The data harvested through the stories shared in the Appreciative Inquiry process can include each of these assessment categories and expand the possibilities for rich, meaningful, and ongoing change. Cooperrider and Sererka (2006) assert that inquiry into what people appreciate strengthens their relationships and increases positive emotions. Cooperrider (1990) argues that we tend to get more of whatever we pay attention to. Appreciative Inquiry is a continual cycle not only focused on the best of what is, but engages all stakeholders in a process of re-imaging what could be and taking ownership for what will be.
REFERENCES


USING A DOLLAR COST AVERAGING TO RANGE TRADE IN BEAR MARKETS

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ABSTRACT
Investor advisors have many clients with retirement plans that allow choices among mutual funds requiring investment strategies that position balances between money markets funds, stock funds and bond funds. Lifetime defined benefit plans indexed to inflation are becoming a historical relic. Unsuccessful investing techniques can significantly postpone retirement. Clients may request that investment advisors suggest alternatives to a buy-and-hold strategy that will not perform well in a flat bear stock market. A different strategy using dollar cost averaging to enter or exit trades with range bound market tops and market bottoms is available that thrives in secular bear markets. Proposed techniques use dollar cost averaging to enter and exit a trades during a secular bear market. Historically, the average length of secular bull and secular bear markets has been 17 years. During a secular bull market, the increase in stock prices can be temporarily offset by a sharp decline in prices. For example, the October 1987 stock market crash actually occurred during the 1983 – 2000 secular bull market. During secular bear markets, there is an overall decline in purchasing power, with the damage typically coming from the effect of inflation on purchasing power. The strategy proposed in this paper helps protect current stock profits while waiting for opportunities to obtain a lower cost basis in stocks using dollar cost averaging during market downturns. Profits can also be locked in with dollar cost averaging during shorter term cyclical bull market peaks within a long term secular bear or bull market.

INTRODUCTION
Investing in the stock market requires investors to identify current market trends and anticipate strategic changes in the market. Questions that need to be answered are: Is this a bull market? Is this a bear market? When will the current bull market end? When will the current bear market end? While an investor needs to be lucky to time market highs and lows, it is important that an investor react appropriately to market signals in order to maximize profits while minimizing losses.

Currently, the market is in a bull market that began in 2009. How long will this bull market continue and when will the market began the next long term market
Hansen and Carlson

decline? On a June 19, 2013 Press Conference, Chairman Ben Bernanke stated “the committee currently anticipates that it would be appropriate to moderate the monthly pace of purchases later this year.” (http://www.federalreserve.gov/mediacenter/files/FOMCpresconf20130619.pdf). Consequently, the Dow and S&P 500 commenced on a summer long decline until September 2013 when the Feds much anticipated start to the end of quantitative easing did not happen. As a result, there was an immediate and significant increase in stock prices.

There is universal agreement that once the Fed does end quantitative easing there will be an increase in bond yields. Consequently, investors will eventually be attracted to rotating out of stocks and into bonds, driving down stock prices. The end of quantitative easing is only one possible impetus for a significant decline in the stock market. Exhibit A illustrates 13 instances of significant market declines beginning with the crash of 1929.

Exhibit A: S&P 500 Market Declines Since 1929 [1]

<table>
<thead>
<tr>
<th>Date</th>
<th>Duration months</th>
<th>in</th>
<th>% Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 9, 2007 – February 23, 2009</td>
<td>16</td>
<td></td>
<td>-52.5%</td>
</tr>
<tr>
<td>March 24, 2000 – October 9, 2002</td>
<td>31</td>
<td></td>
<td>-49.1%</td>
</tr>
<tr>
<td>July 16, 1990 – October 11, 1990</td>
<td>3</td>
<td></td>
<td>-19.9%</td>
</tr>
<tr>
<td>August 25, 1987 – December 4, 1987</td>
<td>3</td>
<td></td>
<td>-33.5%</td>
</tr>
<tr>
<td>November 28, 1980 – August 12, 1982</td>
<td>20</td>
<td></td>
<td>-27.1%</td>
</tr>
<tr>
<td>January 11, 1973 – October 3, 1974</td>
<td>21</td>
<td></td>
<td>-48.2%</td>
</tr>
<tr>
<td>November 29, 1968 – May 26, 1970</td>
<td>18</td>
<td></td>
<td>-36.1%</td>
</tr>
<tr>
<td>February 9, 1966 – October 7, 1966</td>
<td>8</td>
<td></td>
<td>-22.2%</td>
</tr>
<tr>
<td>December 12, 1961 – June 26, 1962</td>
<td>6</td>
<td></td>
<td>-28.0%</td>
</tr>
<tr>
<td>August 2, 1956 – October 22, 1957</td>
<td>15</td>
<td></td>
<td>-21.5%</td>
</tr>
<tr>
<td>May 29, 1946 – June 13, 1949</td>
<td>37</td>
<td></td>
<td>-29.6%</td>
</tr>
<tr>
<td>March 6, 1937 – April 28, 1942</td>
<td>62</td>
<td></td>
<td>-60.0%</td>
</tr>
<tr>
<td>September 7, 1929 – June 1, 1932</td>
<td>33</td>
<td></td>
<td>-86.2%</td>
</tr>
<tr>
<td>Average</td>
<td>21</td>
<td></td>
<td>-39.5%</td>
</tr>
</tbody>
</table>

Information concerning bull, bear, secular bull, and secular bear markets can be found at: http://beginnersinvest.about.com/od/marketsexchangeindices/a/secular-markets.htm.

For bull and bear markets, the general rule is either a 20% increase (bull) or 20% decrease (bear) in prices. Secular bull and secular bear markets have durations that may cover several bull and/or bear markets with the average duration being 17 years. During secular bull markets, stock prices will demonstrate a general increase in price, with any price decreases offset by subsequent price increases.
During secular bull markets a buy and hold strategy will typically result in an investor experiencing a significant increase in real purchasing power. However, with secular bear markets a stock investor that employs a buy and hold strategy will typically experience a decline in real purchasing power. The primary cause of the decline in real purchasing power is the effect of inflation on investment value. Exhibit B demonstrates bear and bull markets for the Dow since 1901.

Exhibit B: The Dow Jones Industrial Average has reflected the following bear and bull markets: [2]
1901-21: 20 years of a sideways to down secular bear market.
1921-29: 8 years of a strong secular bull market.
1929-49: The strong secular bear market remained well below its 1929 level.
1949-66: 17 years of a strong secular bull market.
1966-1982: 16 years of a sideways to down secular bear market.
1982-2000: 18 years of strong secular bull market.
2000- Will be like 1901-1921, 1929-49 or 1966-82?

Retirement plan values may not hold up well using buy-and-hold techniques in a secular bear market if bear market history repeats itself. This article proposes an alternate strategy that can make money in bear markets by adopting a new investing philosophy that anticipates market declines while looking for a bull market to surface.

TECHNIQUES TO BUY LOW AND SELL HIGH IN BEAR MARKETS:
1. Major market cycles are called secular bull or secular bear markets (see Exhibit B). Historically over the past 110 years there are 16 to 20 year secular bear markets followed by 8 to 18 year secular bull markets.

2. The technique of buying and holding general stock mutual funds is most profitable during secular bull markets. For example, during the previous secular bull market starting in 1982, the Dow Jones Industrial Average increased approximately 11 times from $1,000 in calendar year 1982 to $11,000 in calendar year 2000. In the subsequent secular bear market starting in 2000 and continuing through October 2012, the Dow Jones Industrial Average has been comparatively flat ending in the $13,000 range with a gain of just about $2,000 over a twelve year investment.

3. Within a secular bear or secular bull market there are several shorter term cyclical bull and cyclical bear movements.[3] For example, the current secular bear market started in 2000 with a drop of 49.1%. There was a cyclical bull recovery from the S&P 500 low on October 9, 2002 to the October 9, 2007 high. Thereafter another S&P 500 cyclical bear move dropped the S&P 500 index 52.5% to its low on February 23, 2009 (see Exhibit A).
During the secular bear market starting in 1966 the S&P 500 demonstrated three cyclical bear market declines following three cyclical bull market recoveries before the secular bear market ended in 1982 (see Exhibits A and B).

4. Good buying opportunities in cyclical bull markets appear when market pullbacks (less than 10%) or market corrections (10% to 19%) approach their 50 day or 200 day moving average. The following indicators should show a bottoming in the investment: relative strength Index (RSI)[4]; moving average convergence divergence (MACD)[5]; the Williams %R[6]; and the 50 day versus the 200 day moving average.[7] See stockcharts.com and enter the ticker symbol for your investment. Then request the moving averages as overlays and the suggested other indicators for chart display settings. You can search for definitions of these and other stock indicators at stockcharts.com “chart school.”

5. Cyclical bear markets (20% or greater declines) are typical when a “death cross” appears. This is when the 50 day moving average crosses and stays below the 200 day moving average. When a death cross occurs, buying on price drops at moving average price levels does not work. The previous 50 and 200 day price support levels fail and turn into ceiling resistance levels that lower price highs fail to penetrate. In these bear markets cash is king and the best investments are those that don't lose money. Market professionals are making big money by shorting stocks when average investors are panic selling. These bear markets usually end when a “golden cross” appears. This is when the 50 day average crosses and stays above the 200 day average. The 200 and 50 day averages now return to support zones and are good places to buy on dips.

6. “Be fearful when others are greedy and greedy when others are fearful.”[8] This approach results in buying low and selling high. By not following the market herd, you are buying and selling at the most appropriate price timing for an investment considering the supply (abundant when others are fearful) and demand (scarce when others are greedy). "Mean reversion" as defined in Wikipedia.org is the assumption that both a stock high and low price are temporary and that a stock's price will tend to move to the average price over time. A potentially overbought stock is one priced too high above the average price and is ripe for a mean reversion.

7. Trading exit strategies should be predetermined. Selling one-half of the investment at predetermined upper resistance levels, for example a new high, works even if the investment keeps going up. You continue to make money with the 50% remaining stock balance invested. Use the indicators mentioned in #5 above to determine when the investment is topping for a sell. If the investment goes down, another buying opportunity may surface with the profits earlier realized. If all else fails on when to exit with nice profits, an old saying is: “Sell in May and go away.” See www.streetsmartreport.com for a documented sell in
May technique (STS) that has performed much better than all major US markets over the current secular bear market.

8. Volatility in bear markets are a trader’s friend. As a potential investment approaches support levels, a predetermined investment percentage can be deployed. For example, 20%-30%-40%-50% drops in an index can trigger buys when indicators (see #5 above) show a potential comeback developing in the investment. This works well with cyclical bull markets that develop within the secular bear market.

9. The ending of secular bear markets historically occur when:
   Wars are ending. The beginning of the last bull market started in 1982 as the Cold War was ending. We are still in a global war against terrorism that escalated after 9/11/01. The mid-east is a tinderbox with many potential political matches to set everything on fire.
   P/E ratios are low. The current secular bear market started when general stock market index PE ratios were above 30 in 2000. At the end of the last secular bear market from 1979 to 1982, the S&P 500 market index P/E ratios were below 10.[9] Stocks are paying enough dividends to justify stock investments even if the stock price stays flat. The dividend rates on stock indexes are better than the yields on most bonds.

10. The next major secular bull market should start between 2016 to 2020 (2000 + 16 or 20). See #1 above for historical durations of secular bear markets. During this new major secular bull, buying and holding general stock market indexes should work great.

11. When in a bear market, follow a risk of ruin philosophy. Do not usually put more than 50% of the portfolio at risk in volatile assets. This idea keeps plenty of cash available for buying at major market bottoms per item #1 above. One may consider bonds to now be potentially volatile. Bonds are in a 30+ year bull market from 1982 to 2012. Bonds are potentially the next bubble to burst. The treasury for the first time ever can sell inflation-protected-securities at a negative yield. The investors who bought these bonds will only make money if consumer prices rise.[10] Interest rates have nowhere to go but up, which could significantly decrease bond values.

12. The trend is your friend. If the S&P 500 is in a major market decline or advance, almost all stocks follow this decline. Use SPY (S&P 500 ETF) on stockcharts.com to monitor the S&P 500’s bottoming or topping progress. Continue using tools identified in #4 above and avoid taking a position against the trend.
   Disclaimer: Historical market indicators as outlined above are no guarantee of future results.
Example: Assume an investor in a retirement fund using a **buy-and-hold** strategy is fully invested in a stock index fund that holds 2,000 shares priced at $100. This $200,000 portfolio in a 50% bear market drawdown will bottom at $100,000. Eventually, when the stock market fully recovers this portfolio will be valued at the same $200,000 with a 0% return for the duration of this bear cycle drawdown and recovery.

Now assume an investor believes he or she is in the middle of a secular bear market and predicts one or more major stock market declines will occur before the secular bear market is over. The investor can use techniques to buy low and sell high in bear markets. The same $200,000 investment is now invested in 1,000 shares in a stock index fund at $100 and the $100,000 balance is invested in non-volatile liquid assets such as a money market.

The investor predetermines that $30,000 will be invested from the money market into the stock fund in each of the 20%, 30%, 40% levels of the drawdown and the balance of the money market will be invested should a 50% drawdown occur. During the same 50% drawdown the following is invested:

The beginning investment balance of 1,000 shares at $100 a share = $100,000

At 20% drawdown    add 375 shares at $80 a share = $30,000
At 30% drawdown    add 428 shares at $70 a share = $29,960
At 40% drawdown    add 500 shares at $60 a share = $30,000
At 50% drawdown    add 200 shares at $50 a share = $10,000

The ending balance at the bottom of the 50% drawdown is 2,503 shares at $50 a share = $125,150. In practice, a pre-determined level would be skipped and invested at the next level down if rule #4 above shows the S&P 500 is not attempting a bottoming process.

The magic of buying low and selling high now occurs as the stock market eventually recovers. This portfolio is valued at $250,300 (2,503 shares @ $100) with a 25% ($50,300/$200,000) return for the period covering the bear cycle drawdown and recovery.
With the S&P 500 currently testing the top of the decade trading range, it is a good time to proceed to use dollar cost averaging to lighten stock holdings in anticipation of a market top using dollar cost averaging. Reducing stock exposure by 50% gives sufficient funds to reinvest in a market drawdown using the techniques in the above example that allows the investor to make money in a bear market. This technique basically allows the investor to use dollar cost averaging to obtain a lower cost basis in their stock portfolio.

Conclusion

Maybe another large market decline will not happen and this current bear market will be the shortest in our 110 year history. However, it is prudent to have an investment philosophy in place that anticipates at least one more major stock market decline. Using techniques to buy low and to sell high in bear markets enables an investor to thrive when the bear comes out of hibernation.

Endnotes


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[3] Ibid.

[4] “Developed J. Welles Wilder, the Relative Strength Index (RSI) is a momentum oscillator that measures the speed and change of price movements. RSI oscillates between zero and 100. Traditionally, and according to Wilder, RSI is considered overbought when above 70 and oversold when below 30. Signals can also be generated by looking for divergences, failure swings and centerline crossovers. RSI can also be used to identify the general trend.”

[5] “Developed by Gerald Appel in the late seventies, Moving Average Convergence-Divergence (MACD) is one of the simplest and most effective momentum indicators available. MACD turns two trend-following indicators, moving averages, into a momentum oscillator by subtracting the longer moving average from the shorter moving average. As a result, MACD offers the best of both worlds: trend following and momentum. MACD fluctuates above and below the zero line as the moving averages converge, cross and diverge. Traders can look for signal line crossovers, centerline crossovers and divergences to generate signals. Because MACD is unbounded, it is not particularly useful for identifying overbought and oversold levels.”

[6] “Developed by Larry Williams, Williams %R is a momentum indicator that works much like the Stochastic Oscillator. It is especially popular for measuring overbought and oversold levels. The scale ranges from 0 to -100 with readings from 0 to -20 considered overbought, and readings from -80 to -100 considered oversold.”

[7] “Moving averages smooth the price data to form a trend following indicator. They do not predict price direction, but rather define the current direction with a lag. Moving averages lag because they are based on past prices. Despite this lag, moving averages help smooth price action and filter out the noise. They also form the building blocks for many other technical indicators.”


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Bull, bear, secular bull, and secular bear markets

MACD

Moving Averages

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Relative Strength Index (RSI)

$SPX chart Exhibit C is courtesy of StockCharts.com

What Will the Market Look Like Over the Next 17 Years? October, 2001 Sy Harding
Hansen and Carlson


Williams %R

http://stockcharts.com/school/doku.php?id=chart_school:technical_indicators:williams_r
SAP ENTERPRISE SOFTWARE
LEARNING EXPERIENCE IN CHINA

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Monica C. Holmes
Central Michigan University

ABSTRACT

The SAP Enterprise Central Component (ECC) Enterprise Software processes more business transactions than any other business software on the planet. Today’s students, managers, and other business employees need to become familiar with the software to be more effective in their jobs. A variety of different learning approaches are utilized in the introduction of SAP enterprise software to students. Recent developments in learning alternatives bring additional designs in delivering courses. One learning strategy was used with junior students in an undergraduate Management Information Systems major within a business college in China. A model course organization is deployed in that delivery. It utilizes SAP ECC software transactions with a generally accepted training dataset. An ERPsim simulation supports learning business analytics and decision making. Students were surveyed to obtain their perspectives of this model of experiential learning. The results indicate an overwhelming positive reaction to this learning experience.

INTRODUCTION

The SAP Enterprise Central Component (ECC) enterprise software, developed by the German company SAP AG, processes more business transactions than any other business software on the planet. Most of the Fortune 1000 companies use SAP software in managing their business operations (Hayen 1997). This includes a number of companies. Among them are Walmart, Dow Chemical, Delta Airlines, Home Depot, Speedway, and Volkswagen AG. Today’s students, managers, and other business employees need to become familiar with this type of software to be more effective in their jobs. SAP ECC is an excellent learning platform as it provides knowledge of automated business processing done with enterprise software in general. A variety of different learning approaches were utilized, since the introduction of SAP ECC enterprise software into the curriculum of colleges and universities in the late 1990’s. Recent developments in learning alternatives have provided an enhanced approach to the design and delivery of an introductory course. The entire learning model may be used or it can be segmented into transaction processing and managerial decision making elements. The model learning strategy is one that has been used with junior or third year students in an undergraduate Management Information Systems major within a business college in China.
The Chinese environment provides a technology and cultural challenge. For this course, the SAP software server is located in Australia; the course student materials are located on a server in the United States (US); and the course is delivered in Shanghai, China. During the past two years this has been a unique learning experience in China. While other universities in Southeast Asia have included the SAP ECC software in their curriculum, this is the only instance of this learning experience delivered in China. The Chinese environment raises cultural issues (Williams 2011). As young children, Chinese students learn to help each other with their school work. This characteristic stays with them through high school and college. They collaborate with each other on their homework and in class (Hayen and Holmes 2013b). Chinese students are similar to college students in the US. Digital game playing is very popular among the Chinese students. They often play these digital games on their iPhones or smartphones. This appears to give Chinese college students a general understanding of technology that is equivalent to their peers in the US (Hayen and Holmes 2013b).

The paper addresses the model course learning approach by presenting the underlying course learning architecture; the overall model course organization; the assessment of the course methodology; the research analysis to measure the acceptance of the model course organization; and a summary and conclusion of this research effort. The results indicate the efficacy of the model course organization set forth through this research.

**LEARNING ARCHITECTURE**

The course learning experience is organized in a bottom-up and top-down arrangement (Figure 1). In the SAP ECC software environment, bottom-up is learning individual transaction sets to process a related series of transactions such as those for a customer sales order to cash or a purchase order to payment. Top-down is learning the use of data output by various SAP ECC detail and summary reports. Data from the reports are analyzed external to the SAP ECC software and decisions are formulated for subsequent input into the SAP ECC software (See strategic decisions in Figure 1). This is the analytics and decision making processes of managers and others. The external evaluations are done using Excel spreadsheet software. SAP ECC report data are easily exported to an Excel workbook for subsequent use in an analytic Excel spreadsheet.

A closed loop business process (Figure 1) is achieved with an ERPsim simulation (HEC Montreal 2013). The ERPsim simulator generates and sends individual customer sales orders together with other transaction data to the SAP ECC system. They are processed for each day of the simulation. That is, ERPsim uses simulated days with blocks of individual transactions processed for that day by the simulator. Using simulations such as this in the classroom is known to enhance learning (Xu and Yang 2010, Michael et al. 2013). The breadth of the decision making requires that teams are used in working with the simulator. Typical team sizes are from four (4) to six (6). However, they can be adjusted for different learning environments. For the results describe here, student participants are organized into teams of size four (4).
The arrangement between the SAP ECC software and the ERPsim simulator is a technology architecture, where each component runs on a separate server. The simulator is structured in quarterly time periods where each quarter consists of 30 simulated working days. The simulator sends blocks of transactions to the SAP ECC software for the processing of the individual transactions for each simulated day. In the simulation environment a quarter usually occurs over an actual clock time of 40 to 60 minutes, which is a duration that can be set by the course instructor. With the simulator students do not actually carry out the individual transactions as the simulator does that. This allows students to focus on the analytics and decision-making activities as described by Wang et al. (2011).

The ERPsim simulator is available in three different flavors of distribution, manufacturing, and logistics (HEC Montreal 2013). Course instructors select the simulation flavor based on its use within a particular course. For manufacturing, the levels of complexity are introduction, extended, and advanced. Each of these levels adds to the decision-making requirements for students. For example, in the extended manufacturing version, teams can increase their production capacity and use a loan to finance that expansion. The desired level of complexity is selected to match with the course length and objective with the SAP ECC software usage.

**MODEL COURSE ORGANIZATION**

Over the past 20 years, a variety of datasets have been used in SAP ECC education and training (Antonucci et al. 2004). The Interactive Demonstration and Evaluation System (IDES) is the SAP ECC dataset that is used by SAP AG in delivering its various training courses. The IDES dataset is designed for use with most of the training activities delivered by SAP AG. This results in a large and comprehensive dataset. To simplify the learning environment, faculty at several universities have developed datasets which are tailored as more focused learning activities. Of available datasets, Global Bike Incorporated (GBI) 2.11 is the current dataset version used in this learning experience. The operational transactions

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Figure 1. Learning Environment
(Figure 1) are the day-to-day interaction with the SAP ECC. The dataset is created with the support of SAP AG under its University Alliance Program (UAP) (SAP AG University Alliance 2013). It furnishes a common dataset for use in teaching courses while limiting ongoing dataset maintenance. This supports improved course delivery while still emphasizing individual transactions such as customer sales order to cash or purchase order to payment.

The GBI experiential learning modules include navigation, organization structure, customer sales order to cash, purchase order to cash, and production planning. Navigation introduces students to the general execution of various SAP ECC transaction fundamentals. Organization structure is most important with enterprise software as this is the primary manner in which all data are stored and processing occurs within the SAP ECC software. Organization structure furnishes the primary key fields for all data storage. The other three transaction modules provide students with knowledge of the end-to-end activities that occur with those respective SAP ECC transactions.

A second recent development is the ERPsim simulator created and supported by HEC Montreal (2013). It focuses on data that represent business decisions such as product prices and production schedules. The ERPsim simulator runs the underlying individual SAP ECC transactions in a live SAP ECC software instance. It provides summary data in SAP ECC reports for each company. The ERPsim environment is a competitive team-based structure with each team operating a separate company or business entity. The manufacturing simulation uses the Muesli cereal dataset and encompasses the production and sales of six different products. At the end of a simulated time period, summary results data can be downloaded to Excel spreadsheets or database software such as Access. The data are analyzed by students and new decision values are entered. ERPsim engages students in a managerial decision making use of the SAP ECC software. The decision making requires critical thinking (Reid & Anderson 2012) with the reports providing information to support this decision making.

Strategic decisions result from student analytics with decision values input to the SAP ECC software. These are managerial level decisions such as product prices and production schedules. A Results Viewer provides a report of the financial statements at the end of each quarter of the simulation (Figure 2). The ERPsim simulation is arranged in quarters with a typical course timeframe of up to eight quarters. At the end of each quarter, the simulation is paused to allow students time to undertake an in-depth analysis of the prior quarter’s performance and to formulate changes in their strategy before the next quarter. The analytics include both company (team) and market (all teams) reports that comprise quantity sold by product by sales region; average price by product by sales region; and revenue by product by sales region. Each team can determine the analytics they will use and develop those evaluations. This is the most comprehensive comparative results available to all teams and shows each team’s performance relative to all other teams.
A new paradigm is the combination of both the individual transactions, such as those of a purchase order to payment, with the analytics and decision making furnished through ERPsim (Hayen 2013). The result is a course that both allows students to gain an understanding of a transaction, such as customer sales order to cash, and of the impact of processing a number of customer sales orders to determine the overall impact on a company. Both of these are necessary to gain a sound, broad understanding of the use of SAP enterprise software, or any other enterprise software, within an actual business environment. The course delivered in China is an implementation of this paradigm composition. It is a team-based learning experience with all assignments and projects done in the same team (Xu and Yang 2010).

The course is arranged into three components. The first is learning business transaction processing at the lowest level in the SAP ECC software. Learning experiences take place for several different transaction sets. At this level if a team has a difficulty in carrying out the transaction processing steps, they have the ability to re-do any steps where a glitch occurs. The second component is learning the processing and decision making of the ERPsim manufacturing simulation through the introductory simulation. This is conducted in a competitive team environment. The teams do not have prior experience with this analysis and decision making, especially the integration of the various business functions. If a difficulty occurs, that team cannot re-do their activity to correct the situation, because of the competition that is occurring with the other teams. The introductory level ERPsim permits students to gain experience with the analytics and decision making of the production and sales environment of the manufacturing simulation. This leads to the third component of the extended level manufacturing simulation. Experience with the introductory simulation is vital in developing the learning skills for the manufacturing simulation, which are subsequently utilized in the competition of the extended simulation. Fortunately, the introductory and extended levels of the simulation use the same Muesli cereal dataset, so the introductory simulation is a most important learning experience in the use of the ERP simulation in this course.
METHODOLOGY

Using this learning architecture, students in a third year or junior level management information systems course at the University of Shanghai for Science and Technology (USST) in Shanghai participated in this learning experience. A survey of the students’ perceptions of the experience was administered at the end of the course. The survey instrument uses a seven-point Likert scale with seven (7) as strongly agree/extremely satisfied and one (1) as strongly disagree/strongly dissatisfied. The questions are arranged in four general categories described as follows:

1. **Business integration** is the learning related to the interactions among various business functional areas that include marketing, production, accounting, finance, and management that are included in the SAP ECC software and explored through the ERPsim simulation.

2. **Business transactions** is the learning associated SAP ECC transaction sets for the various business functions which is the lowest level of the SAP ECC software.

3. **Teamwork** is the effectiveness of collaborating in teams to complete course activities.

4. **Student satisfaction** is the student perception of how well they liked (a) the ERPsim simulation and (b) the overall SAP ECC learning experience.

A survey with 28 questions was administered to the SAP ECC introduction class in Shanghai, China. All 44 students completed it. Their English proficiency was sufficient to attend this class which was delivered in English. Although the questionnaire had 28 questions, several questions collected demographic data while others were open-ended responses.

RESEARCH ANALYSIS

Twenty-three (52%) of the respondents were male while 21 (48%) were female (Hayen and Holmes 2013a). This breakdown of the students is typical of the universities in China (Hayen and Holmes 2013b). Table 1 illustrates the results of questions 3, 4, 5, and 14 (survey question numbers appear in parentheses) which refers to business integration impact of the SAP ERPsim on student learning. For purposes of this evaluation, all the category responses for agree or satisfied are combined to provide a single view of student perceptions. These responses indicate the participants agree with these viewpoints. It strongly suggests that the students really liked using the SAP ECC enterprise software and the SAP ERPsim manufacturing simulation in learning the integration of business processes.

Table 2 indicates student satisfaction with the use of the SAP ERP enterprise software and the SAP ERPsim simulator in their SAP ECC class. More than 96% of the students reported being satisfied with the use of the SAP ERPsim simulator, the number of SAP ECC assignments and the SAP ERP enterprise software content in their course. It appears the students believe the SAP ECC enterprise software and the SAP ERPsim are appropriate as learning tools to teach enterprise concepts.
Table 1. Business Integration – Impact of SAP ECC and ERPsim on Student Understanding

<table>
<thead>
<tr>
<th>Item (Survey question number)</th>
<th>% Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP ECC helped me better understand the integration of the concepts and ideas of the functional areas of business from marketing, finance and management. (3)</td>
<td>100</td>
</tr>
<tr>
<td>The SAP ERPsim simulations helped me better understand the relationships of business decision making among accounting, marketing, finance, and management. (4)</td>
<td>100</td>
</tr>
<tr>
<td>The SAP ERPsim simulations helped me better understand the issues, concepts, and ideas of data-driven decision making that takes place in business enterprises. (5)</td>
<td>100</td>
</tr>
<tr>
<td>Which of the following best describes your overall level of satisfaction with the SAP ECC in learning about the integration of business transaction processing with business decision making? (14)</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2. Student Satisfaction – SAP ERPsim in the SAP ERP Course

<table>
<thead>
<tr>
<th>Item (Survey question number)</th>
<th>% Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which of the following best describes your overall level of satisfaction with the SAP ERPsim simulations used in the SAP ERP course in understanding integrated business processes? (7)</td>
<td>100</td>
</tr>
<tr>
<td>Which of the following best describes your overall level of satisfaction with the number of SAP ECC assignments in the SAP ERP course? (8)</td>
<td>98</td>
</tr>
<tr>
<td>Which of the following best describes your overall level of satisfaction with the enterprise software content in the SAP ECC course? (9)</td>
<td>96</td>
</tr>
</tbody>
</table>

Table 3 lists the students’ satisfaction with the business transaction assignments done with the SAP ECC software. More than 98% agreed these assignments were instrumental in enhancing their understanding of the issues and concepts associated with the way transaction processing occurred in enterprise software. A similar number of students stated that the SAP ECC software assignments also enhanced their understanding of the integrated nature of business transaction processing.

Table 4 highlights student satisfaction with the use of the SAP ECC enterprise software on several fronts – the learning and depth of learning regarding the SAP ECC system and enterprise software and data-driven business decision making. More than 98% of the participants were satisfied with the use of the SAP ERP enterprise software and the SAP ERPsim simulator in the course. This is an important indicator of the positive reception of the enterprise software and the simulator by the Chinese students as teaching tools. A comment from the students was “the SAP ERP 10 IM course is good for us to learn more about the integration of the concepts and ideas of the functional areas of business from marketing, finance and management.” Other students’ comments suggested that they learned more with the software and simulator.

Table 3. Business Transactions – Impact of SAP ECC on Student Learning
The SAP ECC software assignments helped me better understand the issues, concepts, and ideas of transaction processing that takes place in enterprise software. (10) 98

The SAP ECC software assignments helped me better understand how integrated business transaction processing works to support the actions resulting from business decision making. (12) 100

Questions 17, 18, 19 and 20 (Table 5) refer to the students working in their teams. More than 95% of the students agree that teamwork helped with their learning and communication.

When the participants were asked whether the size of the teams should be changed, 71% stated that the size is about right (Table 6). About 27% indicated that it should be increased and only 2% felt that it should be decreased. These results were supported by survey question number 22 which asked the participants for their suggestions regarding the optimal team size for the SAP ERP course. The

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### Table 4. Student Satisfaction – SAP ECC Software

<table>
<thead>
<tr>
<th>Item (Survey question number)</th>
<th>% Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The SAP ECC software assignments helped me better understand the issues, concepts, and ideas of transaction processing that takes place in enterprise software. (10)</td>
<td>98</td>
</tr>
<tr>
<td>The SAP ECC software assignments helped me better understand how integrated business transaction processing works to support the actions resulting from business decision making. (12)</td>
<td>100</td>
</tr>
</tbody>
</table>

### Table 5. Teamwork – Outcome Measures

<table>
<thead>
<tr>
<th>Item (Survey question number)</th>
<th>% Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working in teams in the SAP ERP course helped me improve my effectiveness as a team member in completing the team assignments in other courses (17)</td>
<td>98</td>
</tr>
<tr>
<td>Overall, the teamwork in all my courses helped improve my communication and other skills in working as a team solving business problems (18)</td>
<td>100</td>
</tr>
<tr>
<td>Our team worked together effectively on the SAP ECC assignments (19)</td>
<td>95</td>
</tr>
<tr>
<td>Our team worked together effectively on the SAP ERPsim simulations (20)</td>
<td>98</td>
</tr>
</tbody>
</table>

This finding is not a surprise since Chinese students like to work in teams and prefer to help their classmates instead of just working individually. This reinforces the classroom observations of the cultural aspect of Chinese education.
majority of the participants indicated that their team sizes were optimal for this learning experience.

### Table 6. Teamwork – Team Sizes

<table>
<thead>
<tr>
<th>Item (Survey question number)</th>
<th>% It should be increased</th>
<th>% It is just about right</th>
<th>% It should be decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your opinion about the size of the teams used in this SAP ERP course (that is, the number of team members) (22)</td>
<td>27</td>
<td>71</td>
<td>2</td>
</tr>
</tbody>
</table>

Overall, students liked the fact these learning tools require them to work in teams. They believe their communications as team members improved. Comments from the students include “It is really an interesting course! Not only knowledge, but also team work. I enjoy this course very much.” Some of the students would like to learn more about the software and simulator; for example, “Learning more knowledge by SAP ERPsim simulations” and “Whether customer research can be add (sic) to simulations for this may help to make decision and plan better.”

### SUMMARY AND CONCLUSION

A number of lessons have been learned through this experience of course delivery in China. Key lessons learned are as follows:

1. The technology environment is not a challenge. The latency of using servers which are widely geographically dispersed does not result in any noticeable delays. The response appears to be the same as for servers located in close proximity to the point of the course delivery.

2. The biggest problem with the technology environment was navigating through the security arrangement for the servers located in Australia.

3. The model course organization worked extremely well as is validated by the student perceptions of the course.

4. The goal of the course for students to understand enterprise software and its use in the day-to-day operations of a business organization was achieved.

5. The goal of the course for students to understand the application and use of enterprise software in decision making across the functional business areas was achieved.

6. Chinese students readily accept the delivery of courses in English as this expands and improves their use of English, which is important in their careers.

7. Chinese students are most comfortable with working in teams as this is an extension of their earlier educational experience.

These results suggest that using the SAP ECC enterprise software and the SAP ERPsim simulations can enhance the learning of the integration of business processes, their related transactions, and decision making by Chinese students.
Overwhelmingly, the students at USST were most satisfied with the model course organization and its delivery using the technological landscape provided to them in China. The technological architecture and model course organization should be tested in other geographical locations to determine the efficacy of the approach on a broader global scale. Future work should examine the use of only one dataset across the entire learning model organization. This would reduce the requirement for students to shift their thinking from one type of business with its data to another type of business with different data.

REFERENCES


ONLINE EDUCATION: PROGRESS AND PROSPECTS

James M. Mbuva
National University

ABSTRACT: The purpose of this study was to determine the gains of the online education and the challenges ahead. The study examined the definition of online education, the gains online education has achieved in terms of teaching and learning technologies, the advantages of online education, and the challenges ahead. The findings of this study show that online education is perceived as internet based delivery, e-teaching and learning, and distance education which employs internet based technologies. Learning management systems (LMS) such as Blackboard, e-college by Pearson, iLMS, Canvas, and others have taken the lead in developing attractive learning management systems to both students and faculty. Some of the advantages of online education such as convenience, accessibility and the like are equally important as the considerations of equity and accessibility to technology, and staying motivated. The outcomes of this study will be shared with students, faculty, program leaders, and administrators. The study predicts that online education will grow like a wild fire with no signs of quenching it, and it will be upon universities and colleges, administrators, students, parents, and the varied communities of stakeholders to be assimilate to this new teaching and learning model.

INTRODUCTION

Internet is perceived as “the outgrowth of US Defense Department work and popular enthusiasts” (Guice, 1998, para. 1). Hence, both engineers and managers in the US Defense Department in the 60s through 70s became the driving force of the development of internet as they developed ARPANET (Guice, 1998, para. 8). Consequently, researchers, and academicians in other interdisciplinary fields started using the network. In a brief timeline, you will notice that in 1969 the defense department came out with ARPA, which was used by the defense, universities; and in 1970 ARPANET was established, but still limited to defense, universities, and regional networks; NSFNET came into being where email, and other networking; in 1991, National Research and Engineering network (NREN) was established; and, in the recent years access of internet to businesses, university students, technical professionals, primary and secondary students brought the use of internet technology for teaching, and learning at the figure tips, where by 1995 the public had access to internet, corporate advertising, and electronic commerce such as internet marketing by eBay, Amazon, PayPal, Billmelater, etc. have persistently taken hold of online trading (Guice, 1998). Apparently, the spread of internet technology hardware has opened varied ways of disseminating education through
teaching and learning; and in the mix teaching and learning has been simplified as the learning management systems (LMS) compete for business in schools (Okamoto, Cristea, & Kayama, 2001; Sener, 2010; Fu, 2010).

METHODOLOGY OF THE STUDY
As part of qualitative research methodology, this study employed “narrative research” method, where I collected the online education narratives, analyzed the themes found in these narratives (McQueen, & Zimmerman, 2006, p.475); and, based on the analysis I developed the following research questions: (1) What is the definition of online education? (2) What are the gains online education has achieved in terms of teaching and learning technologies? (3) What are some of the technologies driving online teaching learning? (4) What are the benefits of blackboard learning management system? (5) What are the advantages of online education? And, (6) what are the challenges that lay ahead for online? The understanding of the narrative research method was enhanced by “meta interpretation” for the interpretation synthesis of online education by weaving together the discussions of the earlier studies, their findings, and the conclusions (Weed, 2005, para. 1). Also, this study took a deliberate reflection on varied resources on online or internet education, analyzed them, and identified patterns of online education and the use of varied technological tools to determine the gains online education has made, and the challenges ahead (Del Carlo, Hinkhouse, Isbell, 2009).

REVIEW OF LITERATURE
The process of literature review was applied to determine the gains online education has achieved and the challenges ahead by providing answers to the research questions. Below, research questions were restated in terms of topics as shown throughout the study.

The definition of online education
Online education can be viewed as an education that is received through the use of varied technologies. Online education is distance education which utilizes internet based delivery, and employs internet based technologies (Kaya, Kesan, & Izgiol, 2013; Cejda, 2010; Johnson, 2004; Ahern & Repman, 1994). In the internet based delivery, community colleges and universities have relentlessly embarked on online education; where curriculum developers, course administrators have included varied courses in the course shells. Consequently, full time and part time faculty members are contracted to teach courses that may be already prepared, or the courses they collaboratively prepare.

In trying to understand what online education is, Milman (2010) shows other terms used to mean online education as “distance education, distance learning, e-learning, online education, online learning, virtual education, or web-based instruction” (p.95; Kaya, et al., 2013). The online education comes as a powerful alternative to face to face learning, where courses at all levels could be delivered in an hybrid format - half time online and half time online, or completely delivered through internet based format.
Teaching. Teaching is a strong ingredient of online education which irresistibly has grown like a wild fire penetrating K-12 education, colleges, and universities (Cejda, 2010; Sener, 2010). Although face to face teaching and learning is not totally wiped out of the face of the educational ecology, online education as is rapidly expanding and its growth is “by leaps and bounds across all sectors of education, from corporate training to higher education to K-12 education settings” (Milman, 2010, p.95). In the beginning, most colleges and universities didn’t think that online education will grow until recently when these institutions, public or private embarked on online education by competing with those who had established themselves as pioneers of online education. In these days, you can hardly open laptop, iPad, iPhone, or desk computer without seeing online education by myriads of private and public universities advertising their online educational programs. This is not a bad trend, but it comes with its own price of quality of education provided due to some of the schools just putting out programs out there without academic scrutiny only assured by accreditation institutions of education at the state and the national levels. Studies demonstrated that by 2004, we had 2.35 million students taking their courses online, and the concern for quality online education was amounting, and some of the ways of increasing quality of online education was to train and support full time faculty and part time faculty involved in teaching (Kim & Bonk, 2006). Figure 1 shows the teaching experience of faculty after taking a survey seeking to understand years of experience with online teaching.

In this study which included surveying professors, instructors, or lecturers, administrators or instructional designers showed that more than 53% of online teaching were women more than anticipated, and the reason might have been that “Perhaps female instructors had become more comfortable teaching and sharing activities online during the few years that elapsed between surveys, or perhaps support for instructors had improved on college campuses, or both” (Kim & Bonk, 2006, para.13).
Learning. Online learning was not only a challenge to institutions, and faculty, but to students too. Students’ experiences of online education and the learning processes was alien as contrasted with the long-felt blessings of face to face learning experience. As a life-long learner, I experienced real blessing of learning under wonderful professors face to face. The discussions and the collaborative learning strategies were extremely appealing. In my classrooms, discussions and dialogues with my students demonstrated that their level of satisfaction in the four block classroom was very high. However, with the coming of online education, online learning was not bread and butter to most of the students. The promising blessings of learning when at home or anywhere in the world was with the help of computers, laptops, ipads, note books, tablets, etc. was enticing and students very quickly adopted to the new technologically rich learning environment. With the acceptance of the online education, today students in colleges and universities enjoy learning in the hybrid or totally online learning environments; and, irrefutably recent studies have demonstrated that e-learning has positively affected teaching and learning (Yuan-Hsuan, Waxman, Jiun-Yu, Michko, & Lin, 2013, Tella, 2011). Sener (2010) predicting the growth of online education showed that “online education will reach full scale” with the characteristics of being a routine, becoming a significant facet of students’ learning
experiences, accepted at the collegiate level to the university, blended learning becoming a norm, and growth of online education breeding more growth (p.4).

**Some of the Technologies Driving online Teaching and Learning**

There are several technologies which have proven effective in driving teaching and learning to higher heights in higher educational learning environments. Some of these include the blackboard, ecollege - classlive pro, moodle, Desire 2 Learn, Angel, webCT, skype, moocs, and webex. These technologies could be used interchangeably to enhance effective teaching and learning. These technologies are part of the information communication technologies (ICT) which has constituted e-learning and at the same time enhancing teaching and learning in higher education where universities and colleges are competing for student enrollment. In the beginning private universities and colleges seemed to be in the forefront of the use of e-technology in teaching and learning, but in these days all universities and colleges, state governed or non-state governed are using ICT in their course delivery (Sander & Gale, 2012; Tella, 2011).

E-learning uses “ICT [Information Communication Technologies] to support learning” (Tella, 2011, p.56; Lai & Savage, 2013). Hence, ICT has become “a central construct that enables and/supports the process of e-learning” and has made great gains in the last thirty years (Tella, 2011, p.56). In order to effectively utilize e-learning in teaching, faculty and program care takers have used course management system (CMS) using software program(s) which use web-based tools to create learning activities for students.

**Blackboard Learning Management System.** Blackboard teaching and learning technology as teaching and learning “tool that allows faculty to add resources for students to access online,” and it includes “PowerPoint, Captivate, video, audio, animation, and other applications are created outside of Blackboard and added into Blackboard courses for students to enhance teaching and learning efforts” (What is blackboard? Para.1).
Figure 2: Blackboard

Source: http://blackboardsupport.calpoly.edu/content/about/whatis.html
With the use of virtual classroom too, students and teachers can chat, and teachers use the whiteboard to communicate and teach in real time.

Table 1: Course Discussion

Source: http://blackboardsupport.calpoly.edu/content/about/whatis.html
Using this discussion tool, students can post their research papers to each other for peer evaluation and feedback. This is a great tool because it can enhance cooperative and team learning strategies we want develop in our students.

Benefits of blackboard learning management system. As describe by Bradford, Porciello, Balcon, and Backus (2007), some of the noticeable benefits of blackboard learning management system (LMS) include: increased availability, quick feedback, improved communication in terms of announcements,
Discussions, virtual classroom, and email; tracking students learning activities, and skill building in terms of organization, and time management (p.2-3).

**Drawbacks of blackboard Learning Management System.** Although the blackboard LMS has shown growth, its drawbacks are a great concern. These drawbacks involve: (a) The software is harder to learn than expected; (b) Certain options may be restricted to specific operating systems; (c) There are inefficiencies in bandwidth use when materials have to be downloaded every time access is sought; and (d) cost.

**e-College Learning Management System.** E-college by Pearson is one of their effective learning management systems (LMS) in teaching and learning, and it has improved since its inception to include course management tools such as course home and its pertinent elements, units of study, course administration, gradebook, email, live, doc-sharing, dropbox, webliography, technical support, etc. See the Pearson e-College class model Figure 3.

**iLMS – inspired Learning Management System.** iLMS is a platform that is used to manage “both online and instructor-led training” ([http://www.ilms.com/?gclid=CJDQ6NHU2bwCFQ-DfgodtG4Aeg](http://www.ilms.com/?gclid=CJDQ6NHU2bwCFQ-DfgodtG4Aeg)). The compatible tools used by iLMS for eLearning include: Adobe Captivate, Articulate Presenter, TechSmith, Camtasia, Integrated iComposer ([http://www.ilms.com/authoring-tools](http://www.ilms.com/authoring-tools)).

**Canvas Learning Management System.** Many universities and colleges have eyed on the Canvas LMS. With rapid growth and competition of which Learning Management System can best deliver educational programs, and the fact that the old systems give way to the new, Canvas LMS is appealing to college professors and students; its layout is much better and appealing to the eye, assignments are in the grade tab and this impresses students because they are able to see the assignments to be graded, and it is stable than other Learning Management Systems ([The Breeze](http://www.breezejmu.org/opinion/article_bddd22a6-8243-11e3-ae9b-0019bb30f31a.html)).

**Other Learning Management Systems.** There are many Learning Management Systems, and some of these include:

- Moodle.
- Desire2Learn.
- Sakai.
- Jenzabar.
- Angel Learning.
- Cengage learning/MindTap.
- Loudcloud.
- Adrenna.
- McGraw-Hill Connect.

**The advantages of online education**

In a traditional classroom, the teacher – student relationship is linear, one way, and the teacher knows everything and passes knowledge to students who are relatively passive. In this model, the teacher owns knowledge and doesn’t care to provide
feedback to students work informing them of the review and the results of their work (Fu, 2010). Students have difficulties trying to understand the teacher, and they are prone to not develop thinking skills. On the other hand, students do not provide feedback to the teacher, and the teacher doesn’t know whether he is effectively teaching or communicating to students which are necessary in enhancing learning in and outside the classroom. This relationship could be best illustrated in Figure 3.

**Figure 3: Teacher – Student One Sided Relationship**

With the advent of technology, teaching has dramatically changed and students have an added learning aid in technology. Here, the teacher receives feedback from students, and students likewise are able to receive feedback from their teachers. This is best demonstrated in figure 4.

**Figure 4: Teacher – Student – E-technology Reciprocal Relationship**

In this triangular teacher – student relationship, effective teaching and learning is the outcome which irrefutably provides a healthy and democratic learning environment. Students are at the center, and they benefit from both the teacher and the e-technologies. Hence, e-technologies have considerably transformed the way students learn, and what they learn; and, at the same time teachers of the 21st century are the beneficiaries of computer assisted teaching and learning. And, according to Fu’s (2010), “Based on constructivism, a teacher is a helper, an assistant, a facilitator in the process of the students’ meaning construction” (p.414). Students do not wait for a week before teachers respond to their questions because teachers can respond and provide feedback on students’ work in a twinkling of an eye through ipads, smart phones, iphones, or laptops. Likewise, students are able to submit their questions, and class assignments to their teachers on a timely manner as opposed to the 20th century learning environments which was surrounded by problematic type writers, and printers. Five notable advantages of using e-learning include:

- Convenience.
- Time efficiency.
- Accessibility.
- Dynamic interactions.
- Creativity. (http://www.webanywhere.org/blog/top-5-advantages-of-using-e-learning-for-schools/)

**The challenges Ahead**
As much as internet technology has developed, and has been used in the educational and business arena, there are current and foreseeable challenges that technology users ought to consider and tackle in their way forward. Some of these challenges include:

- Equity and accessibility to technology.
- Improving achievement.
- Delivering value & Affordability.
- Hidden costs problem.
- Computer literacy.
- Major self-discipline is required.
- Not fit for every style and kind of learning.
- Minimal social interactions.
- Staying motivated.
- Difficult to improve oral communication.
- Technical problems.
- Lack of essential online qualities.
- Lack of adequate training for faculty and online administrators (Whitehead, 2005, para. 3-6; Salsbury, (n.d), para. 1-4; Weaknesses of Online learning, para. 1-5).

**CONCLUSIONS**

Throughout the study we that online education or internet based delivery, distance education, use varied learning management systems to enhance both teaching and learning. Both colleges and universities have embarked on hybrid and totally online educational system which is growing like wildfire. The gains online education has achieved over the years in terms of teaching and learning technologies are overwhelming. Some of the learning management systems developed by Blackboard, e-college, iLMS, Canvas, and the like have attracted e-teaching and learning immensely; and, more fine tuning and springing up of more technologies of online education are inevitable. Irrefutably, the advantages of online teaching and learning to both students and faculty extends from a virtue classroom, to convenience, time efficiency, accessibility, dynamic interactions between students and teachers, and students and students, and the immensity of creativity generated in the process. However, the challenges of online education such as equity and accessibility to technology by all students, improving achievement, delivery value and affordability, hidden costs problem, computer literacy, requirement of self-discipline, online education not fitting all learners, minimal social interactions, and staying motivated must be addressed to enhance sustainability.

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MILLENNIAL STUDENTS AND THE FLIPPED CLASSROOM

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ABSTRACT

Research suggests that millennial students have a preference for interactive and experiential-learning experiences. An increasingly popular approach to meeting the learning needs of this generation of college students is referred to as "flipping the classroom". The flipped classroom approach generally involves the preparation of short audio or video lectures, which students review prior to class. Since students perform the information gathering portion of learning outside the classroom, professors are able to devote class time to the application of that knowledge using active learning techniques.

The purpose of this paper is to examine the flipped-classroom approach to teaching accounting to the millennial generation of students and to explore accounting-students’ attitudes towards this increasingly popular instructional approach. We conducted a survey of accounting majors at an AASCB accredited metropolitan university located in the Northeast. Students were asked questions about prior experiences and attitudes towards the flipped classroom. The results of the survey suggest that students are primarily exposed to the lecture paradigm, but prefer to learn by doing rather than by listening. Students that have not experienced the flipped classroom also appear to be open to the idea and acknowledge the potential benefits. Finally, we also find evidence that students are exposed to a variety of teaching technologies in their accounting courses. Collectively, the results support the use of the flipped classroom approach.

INTRODUCTION

The millennial generation has garnered a tremendous amount of attention for their unique characteristics compared with previous generations. One of the main differences is that millennials were born into a world where technology is ubiquitous. The literature on millennials uniformly suggests that, as educators, we must understand this new generation of learners in order to educate them effectively.

Research suggests that millennial students have a preference for interactive and experiential-learning approaches. Flipping the classroom has become an
increasingly popular approach to meeting the learning needs of this generation of college students. This paper examines the flipped-classroom approach to educating the millennial generation of students and explores accounting-students’ attitudes toward this emerging pedagogy. Results of a survey of graduate and undergraduate accounting students’ attitudes about the flipped classroom and other active-learning techniques are presented.

The paper is organized as follows: a description of the characteristics of millennials is presented, followed by a history and description of the flipped-classroom pedagogy and a brief review of the literature. The research design and survey results are presented next, followed by limitations, possible extensions, and our conclusion.

**MILLENNIAL STUDENTS**

Millennials were born between 1982 and 2005 (Howe & Strauss, 2007) and represent the largest generation in U.S. history with a projected population size in excess of 100 million (Howe & Strauss, 2003). The millennial generation is considered to be unique in many ways, not the least of which is their reliance on technology. Never knowing a world without computers and the Internet, millennials don’t see these technologies as tools, but rather as integral parts of their everyday lives (Merritt, 2002).

Since millennials began entering higher education in the year 2000, it has become increasingly clear that this unique generation of students requires and expects a different approach to learning. Researchers agree that millennial students will change the landscape of higher education in permanent and irreversible ways.

Commonly described in the literature as smart, ambitious, incredibly busy, multi-taskers, ethnically diverse, and digitally literate, millennials think it is cool to be smart, are always connected, expect immediate/instant access and responses, and have a preference for experiential and engaging learning environments. According to Howe and Strauss (2003), the seven core traits that define the millennial generation are: special, sheltered, confident, team-oriented, conventional, pressured, and achieving. Grades and good performance are very important to millennials and they expect to have what they need, when they need it to succeed academically. Colleges and universities must understand and respond to these needs in order to effectively educate today’s students.

A growing body of research exists on the millennial generation and how their distinctive characteristics and learning styles are forcing institutions of higher education to rethink the traditional, lecture-type approach to education. To address the needs and expectations of millennials, many faculty members are adjusting their instructional approach to be more engaging and experiential-based. According to Skiba and Barton (2006), the unique characteristics of millennials
“are challenging the traditional classroom teaching structure, and faculty are realizing that traditional classroom teaching is no longer effective with these students”.

**FLIPPED CLASSROOM**

The concept of the flipped classroom was started in 2007 by two high-school chemistry teachers, Jonathan Bergmann and Aaron Sams, at a Colorado high school. After learning about the ability to use PowerPoint with voiceovers and annotations, the two teachers began recording their live lessons using screen-capture software and posting them online for their students to access. What began as a solution to helping students who missed classes turned into an innovative and transformative approach to teaching and learning that has caught on globally, at different education levels and in a variety of subject areas (Bergmann & Sams, 2012). Using the flipped-classroom model, online audio or video lectures take the place of in-class lectures and class time is reserved for active-learning assignments. Students watch the videos prior to class, freeing up class time for discussions, hands-on application, problem solving, games, and other engaging and collaborative activities. ‘In the flipped classroom, the instructor’s challenge is to design learning experiences that engage students in higher level thinking and problem solving during the class time. It’s about creating, evaluating, synthesizing, and analyzing together’ (Honeycutt & Warren, 2014). In the flipped classroom, the teacher’s role changes from lecturer and deliverer of content to learning coach, guiding students through a series of engaging and experiential-learning activities. The focus is on learning rather than teaching and the approach has been found to increase overall interaction among students and between student and teacher. Figure 1 presents a visual of the flipped-classroom model. This pedagogical approach seems to align well with the learning preferences of millennial students.

**Figure 1. The Flipped-Classroom Model**
Implementing the flipped classroom approach can be time consuming for faculty. Steed (2012) suggests starting small and moving away from lectures to more active-learning methods one lesson at a time. There are many ways to make lessons available for students; faculty can record their own videos or screencasts, use online videos (e.g., Khan Academy), or use lecture notes. To keep students' attention, recorded videos should be kept to around 20 minutes in length. Since lectures are delivered online, they should not be repeated in class. Class time is primarily devoted to active learning and collaborative assignments.

Screen-capture software, such as Camtasia, Adobe Captivate, Jing, and others, can be used to create the digital lectures, which can be accompanied by digital presentations, Excel spreadsheets, and other relevant materials. Faculty can also demonstrate problem solving using these software programs. Accountability for completing pre-class assignments can be monitored using automatically-graded, unit-based online quizzes. Frydenberg (2012) suggests counting the quizzes toward the final grade to motivate students. Not only can the quizzes motivate students to take the preparation seriously, the quizzes also provide the faculty member with important information that can inform subsequent planning for course activities and topic review. If students are experiencing a problem with a particular topic, this can be addressed by a mini-lecture in class followed by active practice assignments.

In-class assignments are often completed in groups of 3-6 students. Faculty move among the groups, providing guidance and answering questions in a just-in-time approach; providing explanations at the exact time students need them. If several groups are struggling with the same concept, the instructor can provide explanations to the entire class on the concepts needed to continue the lesson (Frydenberg, 2012). Frydenberg (2012) also suggests a debriefing at the end of class where students share how they did the assignment and what problems they faced. See Figure 2 for suggested structure for a 75-minute class (Frydenberg, 2012).

**Figure 2. Suggested Structure for 75 Minute Class**
Several of the Chickering and Gamson’s (1987) *Seven Principles for Good Practice in Undergraduate Education* are addressed by the flipped-classroom model, including: encouraging student-faculty contact, encouraging cooperation among students, and encouraging active learning. Frequent student-faculty interaction motivates students to engage with their class work, as does collaboration and sharing of ideas with other students. Active learning improves student understanding as they talk about their work and make what they are learning part of themselves.

Active learning refers to any instructional method that engages students in meaningful learning activities that require students to think about what they are doing and generally involves activities that are introduced in the classroom (Prince, 2004). Active learning is associated with deep learning whereby students develop a personal understanding of the material rather than simply retention of knowledge. By contrast, passive learning is considered surface learning, whereby students receive information by listening to an instructor. Passive learning does not facilitate deep learning (Lucas, 1997).

Four important features of active learning, as summarized by Lucas (1997), are: search for meaning and understanding, a greater student responsibility for learning, a concern with skills as well as knowledge, and an approach to the curriculum which looks beyond graduation to wider career and social settings (p. 189). Such deep learning and personal engagement with content material is important for accounting students as accounting educators are expected to prepare students for a rigorous and complex profession that must keep pace with the dynamic and ever-changing business environment.

According to a review of the literature conducted by Prince (2004), there is considerable evidence to support the effectiveness of active learning in improving students’ recall of information and the effectiveness of student engagement in improving academic performance. Prince (2004) cites several studies, Hake, 1998; Redish, Saul, and Steinberg, 1997; and Laws, Sokoloff, and Thornton, 1999 to support the effectiveness of active-engagement teaching methods.

Benefits of the flipped classroom strategy include: increased time for engaging instruction (Milman 2012); students can study at their own pace rather than listen to a lecture on a topic that they already understand and can view lectures on mobile devices whenever they are ready (Frydenberg, 2012; Steed, 2012); lectures can be viewed as often as needed to understand a topic, and recorded lectures are more time efficient (Frydenberg, 2012). Milman (2012) suggests that the flipped classroom technique is good for teaching procedural knowledge, which is knowledge about how to do something, such as solving an accounting problem.

The literature cautions about the limitations and pitfalls of flipping the classroom, which may include: poor quality of video lectures compared with a face-to-face
setting; student technology issues and conditions under which they might view the video (i.e., in front of TV, distracting surroundings); students may not watch the video before class; instructor and peers are not available to answer questions during video viewing; and difficulties for second language learners or those with learning disabilities (Milman, 2012). Other pitfalls might include faculty initial preparation time; student resistance to taking on the increased responsibility for learning; increased responsibility on students for their own learning can leave some students feeling uncomfortable or abandoned; and culture shock for students accustomed to rote, lecture-style learning (Talbert, 2012). Finally, not all students thrive in a collaborative-learning environment. Active and collaborative learning spaces do not allow for reflection in the learning process. Reflection is important for students to think and work through an idea to make the necessary connections before discussing it with others (Honeycutt & Warren, 2014).

Despite these limitations, however, the flipped-classroom pedagogy has captured the interest of faculty at all educational levels. According to an article in Long Island Business News (Starzee, 2012), the flipped-classroom approach is being implemented in several colleges and universities on Long Island and one of them has introduced an advanced certificate that features flipped-classroom concepts for teachers who want to integrate technology into their classes.

Although the concept is relatively new, research on the effectiveness of the flipped classroom is growing. In a review of the literature, Talbert (2012) found evidence that the flipped classroom helps college students learn more effectively. Studies of University of California at Irvine large-lecture biology classes and a linear algebra class at Franklin College found significantly higher academic achievement using flipped classroom techniques as compared with traditional lectures. And students in a Miami University software engineering class showed strong self-ratings of their abilities to write application software after learning in a flipped-classroom environment.

Frydenberg (2012) implemented the flipped-classroom pedagogy in an introductory Information Technology course with an emphasis on learning Excel and found that the instructional methods captured students’ interests, challenged them, and contributed to their learning. Although the author does not claim increased learning compared with the traditional classroom, student feedback suggests that the flipped-classroom approach was more engaging than listening to an in-class lecture.

Similarly, in a study conducted by Nicholas (2008), survey results from 102 college students reveal that over 90% of respondents preferred a mixture of course activities, including lecture, group work, discussion, and problem solving. Problem solving was found by 92.3% of students to be helpful in learning course material.
RESEARCH DESIGN

To query Millennial students' attitudes and experiences with the flipped classroom and active learning strategies a survey was administered to accounting majors at an AACSB accredited metropolitan university located in the Northeast. The email addresses of juniors, seniors, and graduate accounting majors were obtained and students were contacted by email and directed to the survey site. Approximately two weeks after the initial contact, follow-up requests were sent. In total, 125 responses were received from 741 accounting majors contacted, resulting in an approximate response rate of 17%. A copy of the survey instrument is available from the authors.

The survey collected demographic information about the participants and asked ten questions about the students' experiences in their accounting courses and attitudes toward the flipped classroom. The demographic information revealed that the participants were closely split in gender with 48% female participants and 52% male participants. Most of the participants were graduate students 83/125 (66%). The number of accounting courses completed by the participants was quite high, with 64% of all participants reporting having completed six or more accounting courses.

RESEARCH QUESTIONS

Although the extant literature provides evidence on millennial student characteristics, our survey attempts to solicit the students' perception about learning and the flipped classroom. Our questions focus on three key areas. The first area focuses on students' perceptions about current and past accounting course delivery. In the second area we focus on students' experience and attitudes towards the flipped classroom. Finally, we asked the students to provide one suggestion to improve learning in their accounting courses. Our research questions (RQs) stated formally are as follows:

**RQ1:** What are millennial accounting students' perceptions of the course delivery in their accounting courses?

**RQ2:** Are millennial accounting students familiar with the concept of the flipped classroom?

**RQ3:** What suggestions do millennial accounting students have for their professors in terms of content delivery and course execution?

RESULTS

Research question 1 (RQ1) attempts to solicit the participants’ perceptions about the delivery of their accounting courses. The results of our main survey questions to provide evidence on this research question are presented in Table 1. The results
suggest that millennial accounting students in our survey share many of the same preferences suggested by the extant literature on millennial students. The participants appear to value active learning, with 71% agreeing or strongly agreeing that they enjoy doing different things in class rather than listening to lectures. Also consistent with prior research is the response that a lecture-based paradigm appears to be very prevalent among survey participants, with 91% reporting that their classes are mostly made up of lectures. Student also responded quite negatively to the proposition that their course grade should be comprised primarily of exam assessments. Approximately 68% of participants either strongly disagree or disagree that grading should be comprised primarily of exams. This result is consistent with the participants desire to have additional components, such as group papers, individual assignments, and other projects comprise the grading structure.

<table>
<thead>
<tr>
<th>Table 1 - Students' Responses to Course Delivery Questions</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>My classes are mostly consist of class lectures</td>
</tr>
<tr>
<td>I enjoy doing different things in class rather than lectures</td>
</tr>
<tr>
<td>I learn best by doing rather than by listening</td>
</tr>
<tr>
<td>I prefer my grade to be determined by exam scores</td>
</tr>
<tr>
<td>The level of difficulty in my accounting courses is about right</td>
</tr>
</tbody>
</table>

In research question 2 (RQ2), we seek to gain an understanding of students awareness of the flipped classroom and their perceptions and attitudes regarding same. We ask a number of questions (untabulated) to gauge these factors. First, we describe the concept of the flipped classroom and then ask participants if they have heard of this concept. The results indicate that most students are not aware of the flipped classroom, with 71% of participants reporting that they have never heard of the flipped classroom. This result is not surprising as many educators are also not familiar with the flipped classroom. We then asked if the participants have ever experienced a flipped classroom and 18% indicated experience with a flipped classroom. We then asked these participants how helpful they found the flipped classroom. The results suggest that 68% of the participants found the flipped classroom to be either effective or very effective. Finally, we asked those participants that have not experience a flipped classroom if the flipped classroom
Phillips and Trainor

sounds like something that would help them learn better. Out of the 102 participants 74% responded that the flipped classroom sounded like a good idea and would be willing to experience a flipped classroom. Overall, the results suggest a general lack of knowledge about the flipped classroom, but a willingness to attempt this type of classroom learning style. Those students that experienced a flipped classroom appear to have had positive experiences.

To address research question 3 (RQ3), we asked an open ended question which allowed the participants to provide one suggestion to improve learning in their accounting courses. The results were coded for commonalities and the most common comments are summarized in the following table.

<table>
<thead>
<tr>
<th>Table 2 - Summary of Recommendations by Students (n=81)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation</td>
</tr>
<tr>
<td>More interaction in class, more problems, and less lecturing</td>
</tr>
<tr>
<td>Improve course delivery and/or content of materials</td>
</tr>
<tr>
<td>Decrease pace that material is covered in class</td>
</tr>
<tr>
<td>Connect material covered in class to professional practice</td>
</tr>
</tbody>
</table>

The results in Table 2 suggest that millennial accounting students appear to want more interaction in class with their professors and less lecturing. Also important to participants was an overall improvement in the course delivery and content of materials. Students generally wanted either lectures and/or lecture materials provided online and not during class time. Students also asked for videos and other resources to supplement the materials covered in class. Overall, the participants’ main suggestion is for professors to lecture for less time and include more active learning experiences in the classroom. This result is consistent with the extant literature on the characteristics on millennial students. In addition to the summary presented in Table 2, we provide a sample of student responses to the open-ended question in Table 3 as follows:

<table>
<thead>
<tr>
<th>Table 3 - Selected Student Recommendations to Improve Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Don’t read from PowerPoint...I zoned out before the second slide.&quot;</td>
</tr>
<tr>
<td>&quot;Instead of reading the chapter word by word, do problems on the board!&quot;</td>
</tr>
<tr>
<td>&quot;Try to relate the material to the real world or explain how it would be applied to actual tasks.&quot;</td>
</tr>
<tr>
<td>&quot;Give PowerPoint and lecture notes online.&quot;</td>
</tr>
<tr>
<td>&quot;Would like more real life accounting skills added to courses.&quot;</td>
</tr>
<tr>
<td>&quot;Try to engage students by answering questions, rather than consistent lecturing.&quot;</td>
</tr>
<tr>
<td>&quot;Less lectures and more engaging example problems.&quot;</td>
</tr>
<tr>
<td>&quot;Be interested in what you are teaching, otherwise everyone is bored.&quot;</td>
</tr>
<tr>
<td>&quot;Go over the homework problems step-by-step on the board.&quot;</td>
</tr>
<tr>
<td>&quot;Use online lectures.&quot;</td>
</tr>
<tr>
<td>&quot;I recommend that there are more problems being covered during classtime.&quot;</td>
</tr>
</tbody>
</table>

As the above comments reveal, many students have a very negative opinion about lecturing and also about the use of PowerPoint in the classroom. The comments
also suggest that providing lectures and other materials online would be helpful to students in the learning process.

LIMITATIONS AND EXTENSIONS

This paper includes background information about the flipped classroom as well as an exploratory study examining students’ perceptions and experiences in regards to the flipped classroom. In as much as the survey participants are from one University, our finding and results may not extend to other settings. In addition, although the students who participated in the survey are from varied backgrounds and from ethnically diverse backgrounds, we cannot rule out other factors that may bias our findings. Natural extensions of this study include extending the survey to educational institutions across a variety of settings and formalizing the study to include testable hypotheses.

CONCLUSION

The flipped classroom is essentially part of a broader conceptual framework of teaching which promotes the use of active learning in the classroom and students being responsible for the information gathering portion of learning outside the classroom. In this respect, professors and other educators have been "flipping the classroom" long before this term gained popularity in the educational vernacular. The advent of video software and increased Internet bandwidth, however, has increased the opportunity for educators to create high-quality online content so that classroom time can be devoted to engaged student learning.

The results of our survey suggest that millennial accounting students are exposed mostly to a lecture-based paradigm in their accounting courses rather than a more active-learning approach as espoused by the flipped classroom advocates. Students appear to be open to new technologies in the classroom and express a desire for professors to provide more hands-on and practical applications of the accounting content covered in their courses. In addition, millennial accounting students in our survey appear to value video lectures as a source for content delivery. This result may be indicative of the generation's familiarity and enjoyment of being provided with a variety of visual inputs. Overall, the results of the survey suggest that the flipped classroom may be an effective method of engaging future accounting students from the millennial generation. The survey instrument and a list of flipped-classroom resources are available for the authors upon request.
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MANPOWER DEVELOPMENT FOR INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) INTEGRATION IN EDUCATION

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ABSTRACT: The role of technology in education cannot be underestimated in information-based society of the 21st century. It is largely perceived that the application of constructivist philosophy is a key to meaningful integration of ICTs in teaching and learning. Training and re-training of teachers have a crucial role in the success of ICTs in teacher education, employing the systems approach to ICT integration will augur well for education system in Nigeria at all levels. The paper considers the meaning of ICT, and the scope of ICT in education. It analyzes the 21st century learners and the pedagogies that match them; pointing out that teacher education programs should expose teachers to the knowledge and skills they need for successful and meaningful integration of ICT in education. In addition, it looks at how teachers can progressively build capacities, by adopting, adapting, and applying technology into teaching / learning. The paper states that technology should not drive education, rather educational goals, needs and careful economic balance must drive the use of technology. It concludes by suggesting the way forward for Nigeria towards ICTs integration in education.

INTRODUCTION

“Our students have changed radically. Today’s students are no longer the people our educational system was designed to teach.”

Prensky (2001:1)

Rapid advances in technology and the increasing accessibility of the Internet are rekindling interest in alternative and innovative models for education. These include the use of electronic learning (e-learning), and more recently ‘blended learning’ which combines conventional delivery with technology-based delivery for teaching and learning (Armstrong 2009).

The introduction of innovative technology in education are challenges that requires that education should equip students with the knowledge and skills they need to survive in the new dynamic environment that is characterized by continuous technological changes and growth in knowledge. The uses of ICTs are mandatory and ubiquitous, inclusive and specific for education. The selection of tools and resources are curriculum-driven and the teacher drives the technology. This calls for curriculum reform; new pedagogical skills, reforms in initial training and re-training of teachers; by implication a tall order from the 21st century...
paradigm shift for education. Continuing to teach students using traditional approaches may not augur well for the 21st century world of work and entrepreneurship opportunities (Resta, 2002; Jhurree, 2005; Lalitha, 2005; Jung, 2005; Bingimlas, 2009). The fact is that exposure to technology changes the thinking patterns of those exposed to it, so in keeping with the title, this paper looks at the concept of ICT, in relation to the current definition of educational technology; the scope of ICT in education vis-a-vis the emerging trend of 21st century education. In doing this, it describes the 21st century learners, pedagogical skills, and the need for teachers to align both to promote ‘learning to learn skills’ for lifelong and life wide learning. It also discusses constructivist approach to teaching and learning using systems approach as a springboard for ICT integration into teaching and learning. The paper also delves into factors that work together to facilitate ICT integration into education as means of coming to terms with the paradigm shift, and what it takes to make ICT integration in education successful.

DEFINITION OF INFORMATION AND COMMUNICATION TECHNOLOGY

Information and Communication Technology (ICT) is widely viewed as a means of effecting global changes, which can translate directly to increased growth in all dimension of human endeavor. Tinio (2009:4) defines ICT as a ‘diverse set of technological tools and resources used to communicate, create, disseminate, store, and manage information.’ These technologies include hardware devices, software applications, Internet connectivity, broadcasting technologies, and telephony.

Previously, it was called Information Technology (IT) but when communication element is added, it becomes ICT. This suggests the emphasis on the growing importance of communication aspect of the new technologies (UNESCO Bangkok, 2003; Hooker, 2009). However, a definition of ICT for teaching and learning that emphasizes both information technologies and communication technologies is offered by Moursund (2003 online) as:

**ICT includes the full range of computer hardware, computer software, and telecommunications facilities. Thus it includes computer devices ranging from hand held calculators to multimillion worth super computers. It includes the full range of display and projections devices used to view computer output. It includes the local area networks and wide area network that allow computer systems and people to communicate with each other. It includes digital cameras, computer games, CDs, DVDs, cell telephones, telecommunication satellites, and fiber optics. It includes computerized machinery and computerized robots.**

This current trend and issues in ICT in education may have informed the revised definition of the concept of Educational Technology; shifting the focus to facilitating learning and improving performance, using both formal and informal setting. The new definition is as follows:
The study and ethical practices of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources.

(Januszewski & Molenda, 2008:1)

The key phases in this definition are ‘study and ethical practice’, ‘facilitating learning and improving performance’, ‘creating, using, managing’, ‘technological process and resources’. These phases reflect contemporary thinking in the use of ICT for educational purposes as illustrated in Figure 1.

![Figure 1: A visual summary of key terms in the current definition of Educational Technology. Source: Januszewski & Molenda (2008:5)](image)

This definition shows 21st century educative process. Engineers design, develop and invent hardware, cables and connectors; computer scientists design, develop, and create software; but educators select, design and evaluate technological processes and resources to determine their effectiveness and efficiencies; in addition they design, develop, and create learning experiences, courses, and learning environment; employing technological processes and resources in a fantasy environment, an environment which ‘evokes mental images of physical or social situation’, adds uniqueness to the whole process.

**SCOPE OF ICT IN EDUCATION**

Information and Communication Technology (ICT) is viewed as a force that can advances and improve quality education services as it allows learners to reach their fullest potential in the area of cognitive, emotional and creative capacities.
Gwang-Jo Kim (2009:4) describes ICT in education as hydra headed variable. He distinguished five areas in which ICT can feature in education:

- ICT as a subject (i.e. computer studies);
- ICT as a tool for innovative technology learning process (hardware and software applications for teaching and learning, integrating ICT into teaching specific subjects, using online communication tools, and linking schools with local community);
- ICT as an administrative tool (software applications, knowledge management);
- ICT as an expanded learning opportunity (distance learning, e-learning, m-learning);
- ICT as a facilitator of higher-order thinking skills (i.e. learner-centered, self-directed learning, tailored learning).

In addition the Federal Ministry of Education in Nigeria (March, 2011:32) summarizes the scope of ICT in education as follows:

*This goes beyond teaching ICT as a subject in school. It is also a lot more than having a computer laboratory. It is a combination of these and ICT-based school management system, within-school communication; teacher activities in preparing and delivering lessons, as well as in monitoring student learning and in keeping records and in communicating with parents and all other stakeholders. It also means ICT-backed learning tools for students AT ALL LEVELS OF EDUCATION. Above all, it is anchored on a strong foundation of ICT-versatility in teachers and learners.*

The scopes are calls on teacher education institutions to redesign her curriculum contents at all levels by removing specific ICT courses in favour of integrating ICT throughout all courses. It is also a call for Institution-based training for immersive experiences since “organizations can promote the productivity of the people within them by helping them gain knowledge, skills, and attitude by changing the conditions within the organization so that people can accomplish more, with or without instruction” (Molenda and Pershing 2008:74). Such is possible with the provision of infrastructural facilities, physical resources, Internet connectivity, accessibility, and technical assistants, among others. This has become very important since ICT has been introduced by the Federal Republic of Nigeria into the school system, and some universities run courses in their teacher education programme with the title ‘computers in education’. However, Yelland, Neal, & Dakich (2008:204) argue that the preferred expression now is on ‘Information and Communication Technologies (ICTs) in Education’. This could be a reasonable option as it emphasizes the growing importance attributed to the communication aspect of the new technology. In contrast, Anderson (2010) posits that for education, the term most suitable is e-learning because it combines in its name e(electronic) and learning, thus putting emphasis on learning which ICT did not.
CHARACTERISTICS OF THE 21ST CENTURY LEARNERS

The most important point about the 21st century learners is that they are living in a fast and changing world. They have a lot in common with learners in other parts of the world in terms of music, dancing, dressing, among others, but the most profound is that “they represent the first generations to grow up with the new technology. They have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age” (Prensky, 2001:1). To Anderson (2010:20):

*Their* is a world of television, text messaging, camera phones, iPods, MP3, and interactive video games. They can watch television, listen to their iPods, send text messages, and work online—all at the same time. As they chat online with friends, they use a form of shorthand they created themselves like WBU (what ‘bout you), BRB (be right back), IRL (in real life), WP (no problem), and ROFL (rolling on the floor laughing)...

The quotes show various devices and activities children born and breed in digital environment are constantly engaged in. Prensky (2001) refers to this generation of children as ‘digital natives’ or the ‘net generation’, while their parents and teachers born and breed before the digital revolutions are labeled ‘digital immigrants’. The parents and teachers are struggling to imbibe the digital culture as their children recreate, play around, learn, and entertain themselves with digital tools and processes. These differences point to disconnect between two generations. The only possible way to bridge the gap is through professional development of decision-makers, policy makers, teacher educators, and teachers. They have to be co-learners in the quest for digital education revolution; so as to fill in the gap between traditional teaching practices in schools and the use of technology for teaching and learning. This implies that modes of teaching need to change, curriculums have to be reformed, and infrastructure/facilities have to be put in place to facilitate the exploration of exciting ICT world.

21ST CENTURY PEDAGOGY

Traditional approaches to teaching were generally based on the idea that learners should acquire fixed body of knowledge and specific skills. It was the job of teachers to transmit this knowledge and demonstrate the skills in ways that would enable the learners to remember and reproduce them. From this perspective, it was logical then for the curriculum to drive assessment in terms of coverage. This contrasts the view of 21st century education. The focus of teaching now is on how to get learners unleash their imagination and intuitive capacities and accept responsibility for learning through immersive experiences using different pedagogical strategies. Educational literature identifies several instructional principles essential to foster learning with ICT, such as contextual and situated learning. The way teachers’ teach relate strongly with the ways they
were taught, hence teachers fear the challenges of how to use educational technology tools and activities. However, they have to be technology literate to enable them use ICT resources most effectively and creatively (Newby, Stepich, Lehman & Russell, 2006). Figure 2 illustrates the 21st century pedagogy that should direct thoughts on teaching and learning.

![Diagram of 21st Century Pedagogy]

**CONSTRUCTIVISM AND SYSTEMS APPROACH TO ICT INTEGRATION**

With ICTs, teachers’ will operationalize the paradigm shift from the ‘know all’ to ‘seeking to know how to know’; from ‘this is the answer’ to ‘there are multiple ways of looking at the issue’. Thus, as learning shifts from teacher-centric to learner-centric model, the teachers become less of the sole voice of authority to a facilitator, mentor, and coach (Obanya 2010). Tinzmann, Rasmussen, & Foertsch, (as in Januszewski & Molenda, 2008:36) describe the roles of students and teachers in digital environment as:

*Students are explorers, teachers, and cognitive apprentices, producers of knowledge, and directors and managers of their own learning. Teachers are facilitators, guides, and co learners; they seek professional growth, design curriculum, and conduct research. Learning tasks are authentic, challenging, and*
multidisciplinary. Assessment is authentic, based on performance, seamless and ongoing, and generates new learning.

This quota indicates that teachers’ primary task becomes that of teaching students the skills of ‘learning how to learn’, using ICT tools and processes to engage students in the art and craft of learning, in line with constructivist principles. Constructivist theory recognizes the potential of technology in educational context while situating the learning at its very core and it envisions a journey that takes practitioners though learning about ICT, learning with ICT, and learning through ICT, using ‘hands – on activities with minds – on activities’ – that in learning by doing (Anderson and Glenn, 2003) According to the model as in Woolfolk (cited in Lalitha 2005 online):

The key idea is that students actively construct their own knowledge: the mind of the student mediates input from the outside world to determine what the students will learn. Learning is active mental work, not passive reception of teaching.

Technology in education as viewed from constructivist perspective is that learners should construct their own knowledge based on prior knowledge; via direct and indirect experiences. According to Lalitha (2005 online) constructivist learning environment is characterized by:

- privilege of knowledge construction rather than reproduction;
- providing multiple representation of reality;
- representation of the complexity of the real world;
- emphasis on authentic tasks in a meaningful context;
- encouraging reflection on prior experience;
- supporting collaboration; and
- promoting learner autonomy.

In addition, ICTs also support various types of interactions: learner-learner, learner-teacher, learner-experts, and learner-interface. These types of interactions make the learning process more of a collaborative process. The ability to collaborate is a skill employer’s value and students spend much of their time collaborating and communicating (Siddiqui 2008; Ihebereme, 2010).

ICT meaningful integration process follows a three-step model: (1) planning, the integration, (2) implementing the integration, and (3) evaluating the integration at both policy making and classroom levels. This process is significant because ICT in education is new and both policy makers, teacher educators and classroom teachers, were mostly trained before the advent of ICT in education. They need to acquire digital literacies, understand ICT skills development process, and pedagogical integration skills. These challenges require careful planning (Newby, Stepich, Lehman & Russell, 2006).

From systems approach perspective, planning for ICT integration involves four major components: the learners, the teacher, courses content and ICT tools.
You need to attend to each component in order to make ICT integration as successful as possible (McKeachie & Svinicki, 2006). Education courses should include curriculum courses, methods courses, and practicum courses, and these can be examined in terms of knowledge dimension and taxonomic level based on the current revision of the cognitive categories into a two-dimensional matrix (Anderson & Krathwohl, 2001). Thus, using ICT can facilitate the acquisition of knowledge at all levels as Figure 3 illustrates:

Figure 3: A Systems Approach to Teaching with Technology.

**FACTORS THAT WORK TOGETHER TO FACILITATE ICT INTEGRATION**

Three factors work together to facilitate ICT integration in education. They are: infrastructure/ resources, skills, and relevant curriculum. Physical and electronic tools and materials should be available for ICT integration to be successful. Students and teachers should have access to online and offline resources. (Educational Origami, 2011 online)

The second most important factors are appreciating the benefits of ICT in education, acquiring technical and pedagogical skills. The strength of pedagogical strategies depends very much on the technical abilities, with proper understanding of technologies as enablers and motivators. The teachers who understand the values of ICT and possess technique skills will be able to use ICT to enhance teaching and learning in various ways across different subject matters, this includes:

- Using productivity tools for presentation, demonstration and manipulation of data;
- Use across the curriculum for specific applications - as drill and practice, tutorials, virtual laboratories, visualizations and graphical representations of abstract concepts;

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- Using publishing software to create class, school, or teachers’ newsletter;
- Integrate ICT into specific subjects like science, mathematics, language arts or social studies;
- Using online communication tools like e-mail, and social media to share, distribute, and collaborative in projects and research endeavors; and
- Use offline resources to gather information.

(Tinio 2002:14) with slight modification

The third key factor is the curriculum (what is taught), does it reflect what is required in the 21st century world of work (Obanya, 2009, Anderson 2010). With the introduction of ICT in education it is mandatory for teachers and students to develop learning experiences that are student centered. Digital approaches to teaching and learning engages students in the art and craft of learning, making them active participants in the learning process. Learning drives technology hence ICTs is said to be indispensable tool for the 21st century teaching and learning. Curriculum must reflect the world our students will emerge into. There is need for curriculum reform for update to encompass modern technologies. This will give a new look to what we teach, how we teach, and how we assess. When the needs of work conflicts with contexts and learning experiences in schools, the students will see no reason why they should be in school only to end up been unemployed (Educational Origami, 2011 online). Globalization, creativity, and collaboration are key words in the modern workplaces, where employers and employees are expected to share knowledge and work together towards common goals. This represents a shift from isolation, doing tasks that emphasize conformism and competition; to tasks that requires flexibilities and creativity (Obanya, 2004).

**CAPACITY-BUILDING FOR TEACHERS IN ICT ERA**

Lifelong and life wide learning is essential in a world that changes constantly. To this end, UNESCO planning guide for ICT in teacher education (Resta, 2002) cites three key principles for effective ICT development in teacher education that were put forward by the society of Information and Technology and Teacher Education (SITE). They are:

- Technology must be infused into the entire teacher education implying that it should permeate all courses;
- Technology should be introduced in context. ICT applications like word processing, databases, spreadsheets, and telecommunication should not be taught as separate topics but rather encountered as the need arises in all courses in the teacher education programme;
- Students should experience innovative technology-supported learning environments in their teacher education programmes. This requires that student should see their lecturers engaging in technology to present their subjects. Lecturers should utilize PowerPoint or simulations in lectures and demonstration. Students should use the applications in practical classes, seminars and assignments.
These principles tallies with constructivism recommended instructional strategies that followed several broad principles as Driscoll (2005:394-395) indicates:

- Embed learning in complex, realistic, and relevant environments;
- Provide for social negotiation as an integral part of learning;
- Support multiple perspectives and use of multiple modes of representation;
- Encourage ownership in learning;
- Nurture self-awareness of the knowledge construction process.

In all, the principles are only applicable in technology-based environment. Socially embedded or social negotiated learning highlights the place of net-based learning through collaboration. “The basic premises are that learning emerges through shared understanding of more than one learner” (Siddiqui 2008:142); besides, computers and the Internet can churn out requested information in a variety of ways to facilitate learning (Ellington, Percival, and Race, 1993).

The implications of all these are that teacher education institutions should focus on contextual organizational learning, connoting institutional-based training strategies for just-in - time training. With this, teachers will use acquired skills in authentic situations which is more professional relevant. In addition, this tally with the view of Jung (2005:98) that:

One of the ways to develop teachers’ ICT skills and promote ICT-pedagogy integration in their teaching is the provision of ICT-based training environment where on-demand access to materials, peers, and networks of experts where expertise and advices can be obtained and active discussion can take place in relation to technology or pedagogy.

This implies that experiences and behavior of teachers and students in the use of ICT for educational purposes can be mapped into four stages: For Resta (2002), the steps are: emerging, applying, infusion, and transformation. For Ng, Miao, and Lee (2005), they are: awareness, exploration, integration, and transforming. For Welliver, (1999 cited in Wright, 2006) they are: familiarization, utilization, integration, re-orientation, and revolution. All these stages are basically the same in term of progressiveness, with slight differences. However, there is no distinction between the steps to be followed by teacher educators’ pre and in-service teacher and policy makers. This suggests that ICT tools are new to all; they are all co-learners (Resta, 2002).

The model in Figure 4 has two dimensions: technology and pedagogy. Technology refers to learning about ICT and using ICT for routine work progressively with increasing amounts of expertise. The pedagogy dimension is also in continuum and represents using ICT in creative and innovative ways to deliver instruction in stages progressively. This translates to the stages learners pass through for integrating ICT into teaching and learning – Awareness, Exploration, Integration,
and Transformation. Individual learners, schools, and institutions can be at any stage of integration.

<table>
<thead>
<tr>
<th>Specializing in the use of ICT</th>
<th>Transforming</th>
<th>Innovative and creative use of ICT for teaching &amp; learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand how and when to use ICT</td>
<td>Integrating</td>
<td>Facilitating teaching &amp; learning</td>
</tr>
<tr>
<td>Learning how to use ICT</td>
<td>Exploring</td>
<td>Enhancing traditional teaching</td>
</tr>
<tr>
<td>Becoming aware of ICT</td>
<td>Awareness</td>
<td>Using productivity tools</td>
</tr>
</tbody>
</table>

Figure 4: Mapping teaching and learning to the stage of ICT integration. Source: Majumdar (2005:31) with slight modification

**WAY FORWARD**

- Mode of teaching and learning to change because learners are changing by growing up in a digital world.
- There is a need for curriculum reform at all levels of education in line with the realities of digital age;
- Adequate development of Institutional-based ICT- environment will enhance integration;
- Institutions should explore other potential sources of fund to enhance the financial mechanisms for technology integration in education.
- Decision makers, educational planners, and teacher educators should provide leadership in the use of ICT as models, to bridge the gap between ‘digital natives’ and ‘digital immigrants.’

**SUMMARY AND CONCLUSION**

The use of ICT in education is the emerging trend and issue in 21st century, and this is a challenge to the teaching profession in our society. Recent, development of innovative teaching technologies occasioned by ICT have provided new possibilities for the profession calling for transformation in leadership, curriculum reform, and implementation strategies. Based on these the theoretical argument that constructivist learning enhances deep learning in authentic learning environment is tenable. The trend and issues of ICT in education gave rise to the current definition of education technology with emphasis on using technological resources and processes to facilitating learning and to improve performances.

By ways of conclusion, the researcher is of the view that digital literacies are keys to ICT integration in education since 21st century learners are different from their teachers and parents. The paper end up by stating that the most appropriate way
for professional development is by using organizational and individual learning
and development strategies. In the case of Nigeria, the researcher acknowledges
the efforts being made by government, but then the barriers to successful
integration of meaningful ICT in teaching and learning environment have to be
addressed.

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task team on education.


THE ACCOUNTABILITY/VALUE ASSESSMENT/MEASUREMENT GAP IN HIGHER EDUCATION PROGRAMS IN HEALTHCARE ADMINISTRATION (HCAD)

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ABSTRACT

This paper demonstrates the need for a complete analysis and review of core competencies (assessment/measurement) within the field and study of healthcare administration (HCAD). We use healthcare logistics and supply chain management (HLSCM) curriculum concepts to fully explain identified gaps between academia and industry. Previous theoretical frameworks and elements that encompass such frameworks have fundamental analytical and objective flaws within their development and their assessment/measurement periods of evaluation or lack of evaluation. In all elements of HLSCM, time continues to be an ever constraining factor towards robust operations in which the dynamics of data and information grow at exponential rates creating massive gaps that have yet to be serviced within the organization. However, external consultants and third-party logistics (3PL) have long understood the inefficiencies within the local HLSCM and have been able to create a cultural dependence on the services provided their customer base (patient-center care). This relationship has been communicated to be mutualistic; however, new federal and state policies have pressured partnered entities to reexamine their relationships. This has been done by both internal and external review of previous policies and processes while many restructure into Group Purchasing Organizations (GPOs). The healthcare industry understands both the supply and demand end of operationalizing care and the potential liabilities that a lack of big data analysis through enterprising business intelligence systems places on their organization.

INTRODUCTION

In the beginning, there was a foundation. Those foundations of formation in all things whether analytical (mathematics, physics, etc…) or objective through descriptive matrixes (demographic information, biological, categorical, etc…) or qualitative (written descriptions of an experience) or subjective account (in my opinion, I feel, I think, etc…) all provide some level of information greater than we had without any insight or inquisition.
The purpose of this analysis is not to discredit any model utilized or any particular organization but to critically think and examine the vision and mission for which is our end state. AHRMM outlines a simplistic but effective foundation in its CQO model: cost, quality, and outcome. In it, we have a significant amount of things to consider, however, its foundation provides the mission statement appeal that has led so many successful organizations above and beyond their expectations and truly tested time in its consistency. In a minimal attempt to provide content reliability and validity, this paper aims to identify that elements of cost, quality and outcome (CQO) adopted by the Association for Healthcare Resource & Materials Management (AHRMM) are conceptually sufficient to detect previously mentioned deficiencies in other competency models. These two models utilized during my exploratory analysis are as follows: (1) American College of Healthcare Executive (ACHE) Healthcare Executive Competency Assessment Tool [2014] (2) National Center for Healthcare Leadership (NCHL) Health Leadership Competency Model [2006].

Competency modeling was developed to assess and measure the healthcare administrative skills needed to effectively meet the mission and vision of an organization. In this case, both examples provided outline identified competencies of importance, however, I lead into questioning their ability to both assess and measure areas of identified importance. The gaps in their projected outcomes and analysis fall within a most subjective and descriptive account instead of within the parameters of quantitative reliability and validity needed to fully provide input from the results. Given this, my premise is that such measures cannot be either robustly optimized in measurement nor reported in assessment outcomes without the intervention of healthcare analytics and supportive software for analysis or business enterprise systems that are fully optimized to account for the robust measurements in question.

SUMMARY OF HEALTH REFORM

With the passing of the Affordable Care Act in 2010, change within our healthcare system and how HLSCM responds to such cumulative impact has still yet to be measured. The terms “patient-centered”, “evidence-based medicine”, “value-driven”, “accountable” (ACO), “population health” to name just a few descriptively identified to coming change. Particularly, the changes being made to the financial system (ICD-10) impacting all healthcare reimbursement venues demonstrating concepts of “evidence-based medicine” need be adopted in order for healthcare systems to gain approval for reimbursement of services. These services include the collective of the HLSCM system accounting for $522 billion annually. Further, Dartmouth University has long since provided thirty plus years of longitudinal evidence that variance in care in the United States exists among both like and identical procedures. This has stimulated the government’s response in projects testing best practices in which they are on the verge of demanding standards of care be met while demonstrating evidence-based medicine.
Compounding matters, distinguished persons in business such as Michael Porter has started initiatives such as the “International Consortium for Health Outcomes Measurement (ICHOM) in an effort to standardize evidence-based procedural best practices in specialty care across many differing procedures.

The objective of this brief summary on health reform is to create dialogue around the area of HLSCM considering that big data analytics and computational modeling may be a reality in which the HLSCM community stands to make great strides towards excellence that far surpasses the performance within the current system. Given this, it is vital that collaborative efforts are enhanced in partnering with academic institutions in identifying the current demands within HLSCM. Those with healthcare analytics experiences with software such as SAS or SPSS are scarce while those who have operated enterprise platforms within enterprise resource planning (ERP) programs such as SAP are equally as limited to future employers. In these examples, both SAS and SAP have university-based training programs in which they partner with universities in an effort to address these demands. Those within the HLSCM need to be equally engaged with their future employees during academic training as to not fall short of competitive agencies that identify the need to collaborate and fight for scare and limited talent during their academic years. This could be accomplished if both academia and leadership in HLSCM collaborate during the training process and work to identify “top talent” along with the needs of the industry. Investing is preliminary training in areas such as scholarship support could lead to great dividends if a collaborative and current train model was negotiated and implemented between HLSCM industry and academia.

COST, QUALITY AND OUTCOME (CQO) DEFINED

The Cost, Quality and Outcomes (CQO) Initiative “refers to the intersection of Cost, Quality, and Outcomes, and a more holistic view of the correlation between cost (expenditures as they relate to supplies, services, and other areas in supply chain control [Total Cost of Ownership – TCO] as well as the total cost of care), quality (patient-centered care aimed at achieving the best possible clinical outcomes), and outcomes (financial reimbursement driven by outstanding clinical care at the appropriate costs) as opposed to viewing each independently” (AHRMM, 2014).

LIMITATIONS OF CQO

Specificity is a limitation within the CQO Initiative; however, it is a nice problem to have given the problematic measurement and assessment methods of comparative frameworks. It openly identifies its limitation of specificity in its definition when it expresses an understanding of “correlation” between cost, quality and outcomes. Within this, it would implicate causation in a survey based assessment and measurement set unless otherwise specified. The CQO Movement
and its identified variables indicate a theoretical framework that accounts for its specificity and do not attempt to identify the causal effects within CQO variance. However, the CQO Movement fully understands the problem and the complexity within its HLSCM solutions.

ACHE HEALTHCARE EXECUTIVE COMPETENCY ASSESSEMENT TOOL (2014)

The ACHE Health Executive Competency Assessment Tool (2014) is subjective self-assessment and measurement tool that attempts to identify particular identifiable information regarding the following categories: (1) Communication and Relationship Management (2) Knowledge of the Healthcare Environment (3) Professionalism (4) Business Skills and Knowledge (5) Leadership. During our analysis, this paper will focus on the identified (4) business skills and those skills that overlap with (5) leadership (ACHE, 2014). With the (4) business skills, the ACHE Health Executive Competency Assessment Tool (2014) has the following subcategories: (1) general management (2) financial management (3) human resources management (4) organizational dynamics and governance (5) strategic planning and marketing (6) information management (7) risk management (8) quality improvement (ACHE, 2014). A particular focus with be placed on those that would appear most analytical to include: (2) financial management (5) strategic planning and marketing (6) information management (7) risk management (8) quality improvement. Additionally, within the leadership category, we will also evaluate the category of “managing change” given is empirical end and its overlap with business skills and knowledge.

Within (2) financial management, the subcategory has numerous Likert scaled questions that perhaps will be the most objective account of business skills within the business skills sub-categories. Questions attempting to determine proficiency in areas such as “outcomes measurement and management”, “develop and use performance monitoring metrics” or “develop coding and reimbursement policies and procedures” seem objective, however, there are many questions to be answered. For example, “is this a self-assessment and, if so, it is subjective in response regardless of its objective intent?” If the questionnaire is not self-assessed, “who is assessing and how do we know they have the skill set in question or the optimal organizational skill set?” After all, those with expert-level knowledge in areas such as biostatistics, business analytics, biomedical informatics and health systems engineering are in short supply so why consider that they are within our own organization? In short, an external review can suggest questions such as “what quantifiable assessment indicators is the organization trying to account for and are those indicators being accurately measured within the assessment tool?”

My intention in writing this paper was to review the other sub-categories identified within, however, I can already attest that it is not needed. The same problems
mentioned above will be consistent throughout. Consider this, perhaps we either need a more rigorous employee development plan that focuses on competency-driven initiatives of assessment and measure or we could potentially collaborate with a partner in higher education and let them do it for us. Further, what if your higher education partner conducted a needs assessment on healthcare organizations and robustly optimized their academic training plan to meet your organizational needs. After all, since we all strive to be innovative shouldn’t we be doing something different or considering things that we do not know? I am certain we can all agree that technology is moving along at a lightning bolt’s pace and it is difficult day to day to just operationalize the healthcare system let alone improvise within the system given our time constraints. Is it so much to think that someone who has a particular set of analytical skills could not come into the HLSCM environment and analyze the systemic and operational conditions (using particular modeling software) within the organization (big data analysis) providing better information for more robust decision-making? Now, is that due to “leadership” or is it due to the ability to quantitatively analyze the HLSCM data in order to make an informed decision (analytics)?

**NATIONAL CENTER FOR HEALTH LEADERSHIP (2006)**

So let’s briefly examine another leadership-based model [National Center for Health Leadership (NHCL)] to determine if the previously identified issues have been addressed.

The Health Leadership Competence Model (HLCM) formulated by the NCHL in 2006 has “health leadership” at the center of their framework with overlapping areas from the following categories: (1) transformation (2) execution (3) people (4) health leadership. In this case, the HLCM has the subcategories identified under each category; however, they provide no analytical approach to measuring any of the subcategories. They do spend time attempting to identify how to subdivide sub-categories into particular courses to account for training, however, little is done to demonstrate proficiency regarding the sub-category.

**POLICY AND PRACTICE IMPLICATIONS**

Health reform and its impact on academic training strategies such as HLSCM is apparent. The current practices within the HLSCM will change and drive towards both automation and analytical solutions that account for big data. The time it takes for us to continually adjust to new technologies or avenues to positively affect patient care is not going to slow down. Previously in healthcare, we like to talk about best practices, however, these best practices in care and HLSCM will be global from GS1 standardization to limited variation in like services (Dartmouth Atlas of Healthcare) and lastly provide distinctive and continual best practices in treatment that are reimbursed according to evidence-based care such as that being explored by Michael Porter and ICHOM.
It is imperative that HLSCM organizations demand their leadership account for the ways and methods in which analytical problems are being solved within their healthcare system. Solutions of tomorrow will not softly qualify as “leadership” but will measure each piece of data and subsections of biological and behavioral data to develop ever-changing ways to practice implementing evidence-based care.

HLSCM systems need to create a level of competency that is equal if not surpasses those in 3PL organizations supplying services at a cost to the organization. The evidence that this is occurring is simply large profit margins between the services delivered and those being reported by such large HLSCM companies within the Fortune 500 Index. Hospitals could simply employ top talent and create their own internal consulting system and adjust for the margins between the organization and the 3PL with effective negotiation and contractual management.

WHY DOES CQO WORK?

CQO works because it provides a beginning in which the challenges are appropriately identified without creating false solutions for concerns. “Cost” only identifies that we have a spending problem within the HLSCM and health systems environment. It simply identifies and acknowledges that the Dartmouth Atlas of Healthcare and its thirty year research demonstrating variance in national, regional, and local levels of care for the same procedure is problematic. “Quality” identifies an element of excellence and demand to continually process improve an organization or provide robust optimization solutions at all times. The real concern here is, “how will this be measured and, once gaps in employee development are identified, how will the HLSCM and health system deal with it?” “Outcome” may be of biggest concerns given the evidence-based components to improved health outcome will be required for HLSCM and health systems to be reimbursed for care they may have already absorbed to cost given retrospective payment. HLSCM may also be challenged given optional medical devices can be used with significant differences in cost but not particularly in health outcome.

In conclusion, CQO works because it does not violate any foundational assumptions and accounts for correlations between all three areas.

EMPLOYEE AND FUTURE EMPLOYEE DEVELOPMENT

It is time that innovative HLSCM and health systems get serious about employee professional development. In particular, those fields such as HLSCM with ever more complexities in effectively and efficiently operating at optimal performance must adjust the way we measure their performance. Competency-based performance measurement must be measured both strategically and continuously in order to optimize employee talent and competitive advantage. This
“stratification in excellence” will come from those who best understand the importance of continual development and can quantify their needs and outsource with cost effective partnered supportive elements. This should be a collaborative effort in which the HLSCM and health system invests in its strategic direction as the academic institution utilizes its resources to incentivize and recruit top talent to develop for mutualistic community-based outcomes. The HLSCM and health system must also break down the walls of collaborative restraint by offering an unusual amount of scholarships and internships to the high talent pool or those potentials with such a program. This investment will pay dividends when organizations stand to gain large quantities of needed HLSCM and health systems talent in areas for which they have dependency and are deficient. Lastly, HLSCM and health systems can seamlessly train current employees by conducting an individual needs assessment comparative to the unmet needs of today or tomorrow ensuring the organization has the right people in the right place at the right time.
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THE ETHICS OF TEXTBOOK PUBLICATION CYCLES: 
A DISCUSSION ABOUT INTERMEDIATE 
ACCOUNTING TEXTBOOKS 

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ABSTRACT: The cost of textbooks has been rising at a rate exceeding inflation and rivaling that of the increase in tuition costs. One reason for the increase in prices of intermediate accounting textbooks is the increasing frequency of publication of new editions. As publishers reduce the time between editions, the used textbook market is squeezed, and students have to buy more expensive new books. This paper discusses the issues related to publication cycles of intermediate accounting texts.

INTRODUCTION 

Among the many economic concerns facing our country is the steadily increasing cost of higher education. While tuition and fees have received significant press, the increase in the cost of textbooks has not received as much publicity. Many factors contribute to the increase in the cost of textbooks. Among these are color text and pictures, non-text supplements, and ironically, even technology. While the use of technology to provide electronic textbooks is likely the destination of future textbooks, not all students are willing to give up their hard-copy textbooks. According to market research firm Student Monitor, only 11% of college students have bought e-textbooks (Yu, 2012). In the interim, hard copy textbooks still dominate the market and will do so for the foreseeable future.

The focus of our study is to extend the expanding literature and discussion about another contributing factor to the cost of textbooks—publication cycles. Given our experience with the accounting textbook industry, we will draw on this segment of the industry for this paper. To the extent that the accounting textbook industry varies from other textbook segments, our discussion may or may not be generalizable.

Historically, intermediate financial accounting textbooks have maintained a three-year publication cycle. However, in recent years, publishers have decided to shorten this publication cycle to two years with the talk of even going to eighteen-month cycles. The premise that publishers present as the rationale behind frequent new editions of a textbook is to keep the textbook material current and up-to-date (ACSFA, 2007). This change, however, has not been driven by the textbooks’ authors but by the publishers themselves. The authors should be in the best position to determine the appropriate publication cycle to meet changes in the
material. However, it appears that publishers are responding more to increased competition for their product from other publishers as well as the used textbook markets. According to testimony provided to the Advisory Committee on Student Financial Assistance, “New editions eliminate the supply of used textbooks . . . [and] buy-back initiatives and used textbook exchanges are limited in their efforts to reduce textbook prices when new editions are frequently issued” (ACSFA, 2007, 51).

As an attempt to determine the validity of the claim that newer editions are needed to keep up with changing material, we examined different editions of the intermediate accounting textbook currently used by the faculty at our institution. We compared a chapter from the most recent edition to the corresponding chapter in an older edition. The new edition chapter contained a total of 130 paragraphs. Of those 130 paragraphs, 110 paragraphs were word-for-word copies of the older edition, with the revision of 7 paragraphs and the addition of 13 new paragraphs. While a revision rate of 15.4% of the chapter may to some be considered significant enough to merit a new edition, the rate seems low when we considered that the editions we compared were the 18th edition, published in 2012 (Stice and Stice, 2012), and the 13th edition, published in 1998 (Skousen, Stice, and Stice, 1998).

This begs the question of how much of the push for shorter publication cycles has to do with necessary updates in content or pedagogy as opposed to publishers responding to competitive dynamics of their own industry. This leads us to the discussion point of the ethics of publishers demanding shorter publication cycles so as to reduce the existence of a used textbook market and require students to buy their new, more expensive textbooks, even though the content is essentially the same as the older, cheaper edition. Students are paying more for textbooks, but are they truly getting anything more in return for their money?

What constitutes a new edition of a book? How much has to change for a publisher to consider that a new edition number is justified? This paper will discuss the advantages and disadvantages of shorter publications cycles for intermediate accounting textbooks from multiple perspectives and explore these topics in relationship to the ethical issues involved for publishers, faculty members, and students. Before these issues are discussed, a short introduction to accounting, accounting standards, and the objective of financial reporting will be provided. A brief discussion of the business model for accounting textbook publishers will also be included.

ACCOUNTING

Accounting as a discipline circumscribes many interrelated sub-disciplines including financial accounting, managerial accounting, auditing, taxation, and accounting information systems. The discussion in this paper will focus on financial accounting which relates to the accounting and financial information provided to external users, those outside of the business that is
reporting. The primary objective of financial reporting as defined by the Financial Accounting Standards Board (FASB) is:

to provide financial information about the reporting entity that is useful to existing and potential investors, lenders, and other creditors in making decisions about providing resources to the entity. Those decisions involve buying, selling, or holding equity and debt instruments and providing or settling loans and other forms of credit (FASB, 2010, par. OB2).

In the United States, the Securities and Exchange Commission (SEC) has the power to regulate financial reporting, at least for publicly traded companies, but currently the FASB sets the standards for financial reporting. These standards are supposed to be designed to meet the stated objective. The FASB is supposed to be an independent body, but because the SEC has ultimate regulatory power and because large financial reporting user groups and large accounting firms are interested in the reporting requirements, these groups can certainly influence the standard-setting process.

Financial accounting standards are supposed to be designed to meet the financial reporting objective stated above. However, because of increasingly complicated business structures and relationships and increasingly complex financial transactions, the standard setting process involves both art and science. Resulting standards are subject to change over time in an attempt to meet the financial reporting objective while balancing relevance and reliability of the information and while considering the cost/benefit tradeoff of providing the required information. Thus, there is no “ultimate truth” in how financial information should be reported that will finally be discovered over time. This means that accounting standards will continue to change over time as the economy, business structures, financial transactions, and information technologies change. As the standards change over time, it is necessary to update intermediate accounting textbooks.

**BUSINESS MODEL FOR ACCOUNTING TEXTBOOK PUBLISHERS**

Forty years ago, accounting textbook publishers often prepared single-color books with no pictures, very basic diagrams and exhibits, and a lot of written text material. Over time and because of increasing competition and technology, publishers have added multiple colors, more pictures and graphics, more sidebar explanations, and more real-world examples. Other supporting materials such as study guides for students, solutions manuals, test banks, and teacher supplements were also improved due to competition in the textbook market. New textbook editions were published to incorporate these changes along with changed content due to new or changing accounting standards. Authors would also try to find better ways to explain complicated accounting topics and provide improved pedagogical enhancements to their texts.
As the technology became available, competition caused publishers to provide additional software programs or content CDs with their textbooks. Now these have been transformed into online resources for both faculty and students. These online resources may include the textbook itself but can also include supplemental material, practice quizzes and tests, electronic homework systems, and tutorial programs designed to help the students learn the material better. The cost to develop and support these online resources has been significant. This cost has to be recovered by the publishers to keep them profitable. However, it has been difficult for publishers to market these resources separately, so they have often been included as part of the cost of the hard-copy textbooks or as a minor additional cost if packaged together.

The increase in competition among textbook publishers and the move toward online resources have made the historic business model of thinking that every student would acquire a hard copy of the textbook obsolete. However, the evolution has not occurred at a pace that allows publishers to move to an online-only business model, so hard copies of textbooks are still available.

While new editions of tax textbooks have been published annually for quite some time due to the constant changes in tax law, intermediate accounting textbooks have typically been on a three-year cycle for a long time. However, recently the cycle has been reduced to two years or less. In some ways, this move by publishers may be necessary to keep them profitable at all. Although there are some advantages to textbook users from reduced publication cycles, there are also substantial potential disadvantages.

**ADVANTAGES OF SHORTER PUBLICATION CYCLES**

The most obvious advantage to a shorter publication cycle is that material is more up-to-date; changes in Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) can be incorporated sooner when new editions are published on a faster cycle. Up-to-date material helps students who are preparing for careers in the accounting profession.

Publishers also benefit from a shorter publication cycle. They can make more money by publishing new editions more frequently, thus reducing the length of time that used books can be recycled. In addition, if any errors are found in an edition, these can be corrected sooner if a new edition is published sooner. If authors come up with better ways of explaining the concepts pedagogically, even if the content itself has not changed, these improvements can be made in a timelier manner with shorter publication cycles.

**DISADVANTAGES OF SHORTER PUBLICATION CYCLES**

Shorter publication cycles also have disadvantages. Authors have less time to improve each new edition. Publishers have less time to create and support a given edition. Professors have to switch books more often. Even if most of the...
book remained the same, a professor’s teaching materials and syllabus may need to change in a dramatic fashion.

Students also have to pay more for books, as the used book market is reduced. With the high cost of books, students look for ways to reduce educational costs. They may try to use a prior edition of the text, causing themselves, and perhaps the faculty member, difficulty in determining what has changed and what homework problems to do. The problem with older editions may be exacerbated since the intermediate accounting course is a two-semester sequence at most schools and can even be a three-semester sequence at some schools. If students are not able to take these classes back-to-back, they may find that the edition used for the first semester may have changed by the time they take the next class in the sequence.

DISCUSSION

If shorter publication cycles are a result of more rapid changes in accounting standards and needed textbook content, these shorter cycles might be justified. But what responsibility do publishers have to balance content changes with increased costs for students and faculty? Can publishers justify shorter publication cycles simply because they will be out of business (with no textbook content) if they do not find additional ways to make money on the hard-copy texts? The co-authors of an intermediate accounting textbook told us that a number of years ago, they chose to forego a new edition of their textbook at a time when the publisher would normally have scheduled it. Among the factors influencing the authors’ decision on the timing of their new edition was that the authors felt there were not enough content changes to make much difference. However, in the extended period of time between their editions, competitors provided new editions of their texts, and professors changed to the newer textbooks even though little, if any, content had changed. By making this choice, the authors’ textbook lost a significant portion of the book’s existing market share, a loss that was never fully recovered. Of course, publishers would be concerned about losing market share for any textbook with a large market.

What constitutes a new edition of a book? How much has to change for a publisher to consider that a new edition number is justified? Do new fonts, colors, diagrams, and illustrative real-life examples count as changes? If the name of the company in a specific problem is changed, is the entire problem considered new material? If the numbers are tweaked slightly, does the entire problem count as new material? If slight wording changes are made in one sentence, does the entire paragraph or section count as new material?

When the most current edition of the intermediate accounting textbook used at our institution was published after a two-year cycle rather than the historical three-year cycle, review copies were sent to the faculty members who teach the intermediate accounting sequence. Interestingly, the front and back covers of the instructor’s review copy both had statements about the higher textbook costs to students if faculty members sell the review copies. In fact, the
back cover had a list of ways to keep the price of textbooks down. But not surprisingly, no mention was made that going to a two-year publication cycle was probably the single item, of all of those that could have been listed, which would increase the price to students more than any other item.

Since it is faculty members who choose which textbook to use, what responsibility do they have to balance the choice of a book (or a new edition of a book) against the cost to the students who will be required to have the book? How appropriate is it for faculty members to consider the workload required to update their class for a new textbook edition against the perceived value of the content changes in a new book?

When we received the review copies for the 18th edition of the intermediate accounting textbook, we were surprised to receive the new edition one year before we expected it. We looked at the content changes, considered the cost to the faculty to change editions, and considered the increased costs to students from switching editions after a two-year cycle. We decided not to switch to the 18th edition, but to skip that edition and switch to the 19th edition when it becomes available.

Students also face ethical issues when textbooks are concerned. Can they do without the book? Is it available in a cheaper version or format? Can they acquire international versions which are much cheaper but designated by the publishers as available only in foreign countries? Will they be tempted to find illegal ways to access the textbook material, justifying their actions because of the high textbook cost?

CONCLUSION

Students and parents are experiencing sticker shock when it comes to college textbooks. After assessing family resources, applying for financial aid, and often taking out additional public and private loans, students enroll in college, select courses, and go about the process of purchasing required textbooks and other course materials. Students and parents often pay the textbook bill out of pocket. What they see is often out of line with the price of books in other venues. Since the textbook bill comes last, it can strain or exceed remaining financial resources. In such cases, textbook expenses can become the final barrier to college (ACSFA, 2007, 2).

Our research thus far has raised more questions than it has answered. The primary purpose of this paper is to begin the dialogue and discussion of an industry that, for the most part, has been on auto-pilot for years with no one paying attention to the direction it is heading. The process so far has been very informative in providing directions for further research. We want to make more comparisons in the actual content changes from one edition to another. We want to talk to more publishers and more authors to get their perspectives. It may be helpful to survey faculty to get their views on this issue.
We are interested in investigating the increase in textbook prices that is due to non-content changes (colors, pictures, online resources, etc.). We want to see if competition in these areas is actually raising prices rather than providing more efficient pricing in the textbook market. We also need to look across disciplines. In some disciplines, although faculty may first write textbooks because they think they have a better way to explain the content, in some cases, these faculty members become tied to the textbook business because they can make significant amounts of money. In other disciplines, the motive for writing textbooks may be more tied to prestige and notoriety than to making money through publication royalties. Therefore, there may be differences between disciplines in the reasons for the cost of textbooks increasing at rates far exceeding the increases in the costs for other products.

REFERENCES


THE EFFECT OF PELL GRANT CHANGES ON THE GRADUATION RATE AND COLLEGE FINANCES: A STUDY OF RURAL COMMUNITY COLLEGES IN VIRGINIA

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ABSTRACT

In recent years, colleges across the nation are imperiled with declines in student enrollment, budget cuts and rising costs of higher education (Pope, 2013). The federal student aid programs, including Pell Grant, were created to increase access to postsecondary education. In 2012, the Federal Pell Grant Program was subjected to numerous revisions that could result in a substantial number of students losing their Pell within one to two semesters from their graduation. Pell Grant changes are likely to negatively impact revenues of many colleges and universities. This paper examines the effect of the reduction of maximum semesters Pell Grant can be awarded on expected graduation rates and overall college enrollment for Virginia’s rural community colleges. Rural community colleges are chosen because community colleges in rural areas are more dependent on Federal grants than other types of higher learning institutions. This empirical research suggests that Pell Grant modifications requiring a reduction in the maximum number of semesters of eligibility will have a significant impact on cohort size at the beginning of each fall and graduation class sizes at the end of each semester in Virginia’s rural community colleges. The decline in enrollment negatively impacts the revenue stream for these community colleges. It is debatable that factors such as improvement in employment rates and improvement in the local job markets may have a larger impact on college enrollments than Pell Grant modifications. The research may help community colleges as they work to increase enrollment and lobby for additional funding and revenue sources.

INTRODUCTION

Nationwide higher education institutions are facing multiple financial challenges due to declines in student enrollment, budget cuts and the rising cost of higher education (Pope, 2013). The education budget cuts have direct impacts on available financial aid dollars to needy students, hence negatively impacting
The ability for students to attain federal aid, notably Pell Grant monies, is now made harder due to legislative modifications that took effect in 2012. The primary objective of the federal student aid programs is to increase access to postsecondary education. These Federal Programs include Pell Grants which support low income students to attain post-secondary education at undergraduate and certain post baccalaureate levels (U.S. Department of Education, 2011). Created in 1972 as the Basic Educational Opportunity Grant, the program was renamed in 1980 for Senator Claiborne Pell (D-RI), who led the creation of the program. Currently, the maximum award amount is set by the U.S. Congress, and administered by the U.S. Department of Education (The Pell Institute for the Study of Opportunity in Higher Education, 2013).

Community college students tend to be the most federal aided group amongst college students (Katsinas, Hagedorn, Mensel, & Friedel, 2011). Financially challenged students are often attracted to community colleges because of their mission of offering a high quality education at a low cost (Mendoza, Mendez, & Malcolm, 2009). The availability of financial aid for these students can be a determining factor of whether or not they pursue postsecondary education.

According to the American Association of Community Colleges (2013), most community colleges receive the majority of their revenue from state appropriations, tuition and fees, and local appropriations, respectively. Consequently, since 2008, Pell Grant awards have had the highest growth in rural community colleges (Katsinas, Hagedorn, Mensel, & Friedel, 2011; Katsinas, Bray, Koh, & Grant, 2012). Rural community colleges are defined as schools that reside in and service communities outside of urban cities and towns. Virginia’s rural community colleges geographically are located from the Eastern Shore to the Southside and Southwestern parts of the state, often referred to as the ‘Rural Horseshoe’.

Virginia’s community colleges have traditionally responded to the years of state budget cuts and decreased state appropriations by increasing tuition (State Council of Higher Education for Virginia, 2013b). This increase is effective as long as enrollment continues to grow and federal grant dollars are available. However, recent studies have shown that when federal grant dollars are less attainable, finances for certain types of colleges are negatively impacted (Katsinas et al, 2013).

The recent changes to the Pell Grant program include the elimination of ability-to-benefit test, the income levels for zero expected family contribution (EFC), the elimination of the 10% maximum award, and the reduction in the maximum number of semesters to receive grant monies (The Pell Institute for the Study of Opportunity in Education, 2013). These changes in the Pell Grant rules and funding will have a direct impact on the capabilities of Virginia’s rural community colleges to raise funds, manage their balance sheets, as well as, the ability of needy rural students to attain their education goals. As these changes in the Pell Grant award are very recent, there are few studies which have assessed the
full impact of these changes on both student and colleges. This research is an attempt to study the impact of the changes in the Pell Grant rules on educational attainments and on college revenues of the rural community colleges in Virginia.

**LITERATURE REVIEW**

For more than 40 years, the Federal Pell Grant program has served as the federal foundation of support for needy students. Historically, the Pell Grant program is funded by the federal government and administered by the U.S. Department of Education and awarded to low-income undergraduate and certain post baccalaureate students who are citizens or eligible non-citizens (The Pell Institute for the Study of Opportunity in Higher Education, 2013). Students are eligible to use grants at any one of the approximately 5,400 postsecondary institutions participating in the program. Grant amounts are dependent on the student's expected family contribution (EFC), the cost of attending the institution, whether the student attends full-time or part-time, and whether the student attends the institution for a full academic year or less. The maximum award amount is set by the U.S. Congress, and the current maximum award is set to $5,550 per school year.

The federal financial aid program has been revised multiple times since its inception. The Pell program has grown in size in appropriations and aid award since some of the major revisions were made like EFC contributions and the reduced time frame to finish school (U.S. Department of Education, 2011). In 2007 and 2008, Congress passed the College Cost Reduction and Access Act and the Higher Education Opportunity Act, respectively, which changed the Pell Grant eligibility rules (Federal Education Budget Project, 2013). These changes included the amount and types of income excluded from the eligibility formula, increased the income level for automatic qualification and allowed students to receive more than one grant during the school year (Federal Education Budget Project, 2013). However in 2012 appropriations, Congress instituted additional changes to the Pell Grant program. These changes decreased the period for student eligibility, lowered the threshold for income qualification, and removed funding for summer school. For the 2012-2013 school years, it is estimated that over 100,000 students nationwide were rejected for Pell Grant funding (Bradley, 2013).

The data shows that the rate of inflation in college cost has exceeded inflationary rate in virtually any other sector (Martin, 2005). Costs appear to have risen because of the demand for new services from higher education, unfunded government mandates, mission creep, lower productivity, excessive overhead, resistance to new technology, and inflated administrators’ salaries (Martin, 2005). According to the State Council of Higher Education in Virginia (2012), “an affordable education at a two-year public institution is at risk”. For example, in the Commonwealth of Virginia, per capita disposable income increased by 2.3 percent, while average tuition and mandatory fees increased by 5.9 percent from fiscal year 2011 to 2012 (State Council of Higher Education for Virginia, 2012).
Traditionally, public two and four-year institutions are funded by a combination of state government support, local tax appropriations and tuition revenue (State Higher Education Executive Officers, 2012). For years state funding for higher education has been on a decline, presenting challenges for institutions of higher learning (Kennamer, Katsinas, & Schumacker, 2010). In an effort to offset the decrease in state appropriations, colleges including most affordable community colleges are shifting the burden to their students and parents by increasing tuition and fees. However, affordability remains a concern for low-income students who must rely on loans or grants awards to subsidize the increasing costs (Kennamer, Katsinas, & Schumaker, 2010).

State funding is closely associated with college enrollment (Hicks & Jones, 2011). In rural areas, enrollments are low due to disperse population. Furthermore, lower population density also results in lower state and federal funding (Hicks & Jones, 2011). Colleges, specifically community colleges, in these communities are faced with the challenge of providing high quality education with very limited resources. Depending on the state and locality, various traditional colleges and community colleges have the authority to assess and levy local property taxes as an additional stream of revenue. However, most rural community colleges do not have access to local property taxes to help mitigate their financial revenue constraints (Hicks & Jones, 2011).

Rural area community colleges are often the institutions best capable of initiating and nurturing low-income students via local and regional collaborations that can find solutions for critical community problems including geographic distances, poor preparation for college, weak economies, and poorly trained workforces (Garza & Eller, 1998). Rural community colleges have traditionally based their mission on the philosophy of open access to higher education, reaching those who face these special barriers to education and employment, therefore, requiring colleges to move beyond traditional open-door strategies for increasing access and to provide aggressive outreach and support services to the disadvantaged students (Garza & Eller, 1998).

One of the primary objectives of the federal financial aid program was to make college more accessible for students from “disadvantaged socioeconomic backgrounds” (King, 2002). Kennamer, Katsinas, & Schumaker (2010) note that during the 1970’s, the maximum federal Pell Grant covered 84% of the average cost of attendance at a traditional four-year college; however, that coverage amount declined to 34% by the 1990’s. The reduction of federal grant monies, forces students to obtain debt to cover the rapidly increasing tuition and fees. King (2002) studied distribution of subsidized educational loans in two and four-year colleges. It was reported that there is unequal distribution of federal subsidized loans offered and accepted by low income students attending four-year private institutions compared to the low income students enrolled at four-year public institutions.

For generations, the United States ranked number one in the world for college graduates (American Association of Community Colleges, 2012). In recent years studies have shown of all new college enrollees, 46% of students do
not graduate with any credential within six years (HCM Strategists, 2013). As a result, this trend in persistence and graduation rates has placed the United States at a rank of 16 in the world for college graduates between the ages of 24-35 (American Association of Community Colleges, 2012). The consensus among researchers is that grants and work study are more effective in promoting persistence in colleges (Alon, 2007). The Pell Grant program provides an opportunity for an underserved population that would otherwise not afford college and the other expenses associated with matriculation (Mendoza, Mendoza, & Malcolm, 2009).

The majority of college students in the U.S. today rely on federal aid money to fund college (NCES, 2013). From academic years 2006-07 to 2010-11, the percent of first-time, full time undergraduate students at four-year degree-granting institutions receiving financial aid increased from 75 to 85 percent (U.S. Department of Education, 2012). For two-year institutions, the percentage of first-time, full time undergraduate students receiving aid increased from 67 percent in 2006-07 to 77 percent in 2010-11 (U.S. Department of Education, 2012). Moreover, rural two-year colleges have higher rates of Pell participation; and their students incur higher out of pocket additional expenses such as childcare and transportation (Katsinas, Bray, Koh, & Grant, 2012).

Under the new Pell Grant guidelines, students can continue in school full time for six years without exhausting their eligibility for financial aid. However, research such as one conducted by the Education Policy Center at the University of Alabama has shown many students exhaust Pell Grant funds before they actually finish matriculation (Katsinas et al, 2013). This will leave some students with loan debt without any diploma and many schools with less financial resources due to decreased enrollment (HCM Strategists, 2013). This is best stated by Carey (2013), “tuition is financed by federal financial aid”. College administrations fear that the current trends in financial aid may result in little to no enrollment growth especially among the students from the low and middle-income families who cannot afford to pay for tuition without assistance (Kennamer et al., 2010; Garza & Eller, 1998). Two-year college enrollments are more tuition-sensitive; lower federal aid results in immediate enrollment decline thus leading to lower overall revenue of the institutions.

Garza and Eller (1998) have indicated that community colleges would be the catalyst for local and regional development. Community colleges serve as the gateway for students to attain degrees and certifications and working professionals to enhance their skill sets which is conducive to community development and economic wealth (Garza and Eller, 1998). On the other hand, declining financial aid and stricter qualification rules are possibly inhibiting the education attainment. This effect would be more pronounced in rural and other sparsely populated areas as both education and income levels tend to be lower in these communities. However, there is little published research which examines the impact of recent changes in Pell Grant funding on rural community colleges which are likely to be affected most by these changes. This study is an attempt to fill the gap in the available research analyzing data from rural community colleges in Virginia.
PROBLEM STATEMENT

As indicated in the above section, the federal government has modified the rules of the Pell Grants in 2011. These changes may have a large impact on both college enrollments and educational achievement of students especially in the rural communities. For many students who are just within one to two semesters of graduation, financial aid or Pell Grant monies may run out sooner than in the past as a result of the new modifications. This may discourage some students in enrolling in the community colleges, therefore reducing the college revenues.

Virginia’s community college system plays a vital role in the rural locales as educational achievement levels are low. One in four residents in these communities, do not have a high school education. And for those who have high school education, financial aid is the most vital means for attaining a college education (Baliles, Chichester, & Harrell, 2013). Across the country, community college enrollment administrators have been reporting a decline in enrollment (Katsinas et al, 2013). Currently, Virginia’s rural community colleges are struggling with enrollment decline. This decline is due to many factors including modifications made to Pell Grant requirements. The main objective of this research is to study the scope of impact of Pell Grant changes on college graduation rate and enrollment in Virginia’s rural community colleges.

This study focuses on two research questions:

a. Does new federal Pell Grant rule regarding maximum number of award semesters have a negative impact on the community college’s revenues?

b. Does new federal Pell Grant rule regarding maximum number of award semesters restrict education attainment among needy students in the rural areas?

HYPOTHESES AND RESEARCH METHODOLOGY

To statistically test the questions posed in the preceding section, two basic hypotheses were developed. Community colleges are financed via government and private resources (Dowd, 2005). The private resource revenue includes tuition and fees, auxiliary services and philanthropic gifts. The government revenue includes state and local government appropriations. Both public and private revenues are largely dependent on enrollment. Therefore, any change in enrollment will impact the revenue stream. Until recently, many schools would have increased tuition to compensate any loss in the revenue due to government funding or loss due to decrease in enrollment. However, increasing tuition rate is also limited due to the affordability mission of community colleges. It can be said that community college revenues are directly proportional to the enrollment. Hence to address the first research question related to the college revenues, the enrollment numbers can be examined. The first hypothesis is set as:

Hypothesis 1:
H0: New Pell Grant rule which reduces maximum number of semesters of eligibility will have no impact on overall college enrollment in Virginia’s rural community colleges.

H1: New Pell Grant rule which reduces maximum number of semesters of eligibility will reduce overall college enrollment in Virginia’s rural community colleges.

The graduation rate is often used as a measure of student outcome and is the common indicator of institutional success. A student’s success is exemplified by the persistence to complete educational goals and graduate. The graduation rate is regarded as a sufficient output measure and is often used in assessing higher education success, as well as ranking colleges. As previously discussed, the graduation rate is expected to be negatively affected by the changes in the Pell Grant. To test the second research question regarding attainment of educational goals, impact of Pell Grant rules on the graduation rate can be examined. The second test hypothesis set as:

Hypothesis 2:

H0: New Pell Grant rule which reduces maximum number of semesters of eligibility will have no impact on graduation rates in Virginia’s rural community colleges.

H1: New Pell Grant rule which reduces maximum number of semesters of eligibility will reduce graduation rates in Virginia’s rural community colleges.

To test these hypotheses, the past data on the graduation rates and enrollment from the rural Virginia Community Colleges System (VCCS) was obtained. A two tailed t-Test was utilized to study the groupings within the community colleges.

DATA COLLECTION

The data for the 14 rural Virginia community colleges locales from 1996 to 2003 on graduation rate and enrollment levels were collected from the State Council of Higher Education for Virginia (SCHEV) research website. Currently these 14 VCCS localities, regarded as the ‘Rural Horseshoe’, are labeled as such because of locality and common traits including, but not limited to, low college attainment. For the purpose of this study, the data was filtered to graduation rates by sub cohort based on Pell Grant recipient status and “First Time” in College designation at the time of matriculation. For this research, data on graduation rates was collected for each sub cohort from semester 1 to semester 18 beginning with year 1996 and ending with 2003. At the time of this study, cohorts that began school year 2004 data had not been published past semester 16 by SCHEV; therefore were excluded from data collection. For further analysis, data was also filtered by gender and ethnicity. Each cohort includes all attendees irrespective of age. All data was collected for students enrolled and graduated at the original institution only.
RESULTS AND DISCUSSION

First-Time in College (FTIC) Enrollment Trends 1996-2003: Generally rural colleges represent approximately 30% of overall enrollment in the VCCS. Enrollment trends in the urban and rural community colleges are not equivalent. Urban VCCS largely follows the national trend; however, rural enrollment growth is relatively volatile (NCES, 2008). The enrollment trends in the rural community colleges generally show a lower increase or a sharper drop compared to urban counterparts during the study period. For example, matriculation for the entire VCCS system experienced an average growth of over 7% from 1996-2003. The enrollment figures in urban locales grew by 7.5% during the 8 year period. However, enrollment for the rural locales, on average grew 6% during the same period. This difference in enrollment trend may have been attributed to changes in federal financial aid.

Overall Pell Award Trends in VCCS 1996-2003: From 1996-2003, on average over 31% of rural students relied on Pell Grant awards to fund their education compared to 21% for total VCCS system. It is clear from the data that there is heavier reliance by rural VCCS students on the Pell Grant program due to socio-economic factors. National Center of Education Statistics (Choy & Bobbitt, 2000) has reported that about 26% of all college students are low-income. Assuming Pell grant awardees are distributed evenly among low income students, a higher percentage of rural VCCS students receive Pell Grants. A financial dependence study conducted by Katsinas (2013) concluded that “the simple truth is that all community colleges are more tuition-sensitive today, which means cuts at the federal level in Pell Grants can result in immediate enrollment declines, which in turn mean lower tuition revenue”.

First-Time in College (FTIC) Pell Grant Enrollment Trend 1996-2003: New Pell grantees enrollment for the students who are entering the college first time is discussed in this section. On average the VCCS experienced a 5% increase in Pell enrollment compared to 4% increase for rural schools in this period. Trend in the growth of the Pell Grant’s cohort size has two different phases. The Pell Grant growth pattern in rural community colleges shifts dramatically after 2000 as it grew by an average of 11% from 2001-2003 whereas it showed an average decline of 0.5% from 1996-2000. The increase in Pell Grant recipients was not as large in urban VCCS as it grew 3% between 1990-2000 and grew 9.5% between 2001-2003. This difference in 1996-2000 and 2001-2003 periods could have been due to a slowdown in the economy after the bursting of the Internet bubble in 2000.

First-Time in College (FTIC) Pell Grant Enrollment Trends by Gender and Race: The ratio of women to men enrolled as the FTIC Pell recipients in the rural locales was approximately 2 to 1. This indicates that there are more women with lower income groups who are seeking college education compared to men. Nationally 57% of the lower income college students are women (Choy & Bobbitt,
This is probably due to the fact that women are also more dependent on the Pell Grants due to family considerations. However, women represent about 65% of total Pell recipients in VCCS, which is substantially higher than national average.

The ratio of majority to minority enrolled as Pell recipients in the rural locales from 1996 to 2003 was 4 to 1 that is on average, 20% of students enrolled as a Pell recipient at the rural locales were minority. In a recent publication by Finaid.org (2011), minority students at all colleges represented over 40% of all Pell Grant recipients. It can be argued that any negative impact on the revision of Pell Grant rules on VCCS will have somewhat similar impact nationwide. Any restrictions on the Pell Grant awards will have more impact on minority students as the Institute for College Access and Success (2014) revealed that, “For students of color, Pell Grants are particularly important. More than 60% of African-American undergraduates and half of Hispanic undergraduates rely on Pell Grants to attend school”.

In general, lower enrollment growth in the Virginia’s rural community colleges may be due to other issues ranging from low college attainment rates, low wages, high unemployment, to illiteracy within the communities and areas they serve (VCCS, 2011). Furthermore, a larger percentage of underprivileged, underserved students reside in rural communities. As shown earlier, a relatively higher percentage of students in rural areas receive Pell Grants; hence, rural students as well as rural community colleges are more susceptible to negative changes in Federal funding.

**Pell Grant Recipients’ Graduation Trend 1996-2003:** The graduation rate is higher in rural locales compared to the overall VCCS graduation rate. For VCCS Pell recipients from 1996-2003, approximately 18% graduated within 6 years or 12 semesters. This is nearly the same graduation rate nationally for Pell Grant recipients obtaining an associate’s degree (Finaid.org, 2011). Research has shown low graduation rates in 2-year colleges is due to the nature and mission of the schools as substantially large numbers of student enroll due to low tuition, easy access and variety of courses, but few finish the entire program (Garza & Eller, 1998; Mendoza, Mendez & Malcolm, 2009).

The changes in the Pell Grant rules under scrutiny in this research deal with the reduction of the number of maximum period of grant from 18 to 12 semesters. Therefore, it is important for this research to estimate the number of students who graduate beyond 12 semesters. Graduation rate for the entire VCCS Pell recipients in the first 12 semesters is approximately 18%, but that graduation rate improves to 21% if students are awarded the grant for 18 semesters. It must be noted that the cohort size gets smaller each additional semester students receive Pell Grant monies.

The graduation rate of Pell recipients in the rural VCCS is higher compared to overall graduation rate of Pell recipients in the entire VCCS over the study period, 1996 to 2003. In rural VCCS, 23% of all Pell recipients graduated
within 6 years or 12 semesters; that number improves to 27% if Pell grant is awarded up to 18 semesters.

**Pell Graduation Trend by Gender:** FinAid.org (2011) reveals that “Pell Grant recipients are much more likely to be female”. Nationally, female recipients are more likely to graduate within 6 years compared to male recipients (FinAid.org 2011). Graduation rate for the VCCS male Pell recipients in the first 12 semesters is approximately 15% and female Pell recipient graduation rate is 26% within 12 semesters. However, 18-semester graduation rate jumps higher for both male and female to 18% and 31% respectively. In the rural locales, graduation rates for male Pell students are 20% within 12 semesters and 22% within 18 semesters whereas similar graduation statistics for female students are 25% and 29%.

**Pell Graduation Trend by Race:** For the VCCS, minority graduation, which includes all students of color, is approximately 14% within 6 years, and 17% within 9 years. The dropout or stop out rate is 83%. Pell recipients’ graduation rates for all students (majority and minority) are 18% within 12 semesters and 21% within 18 semesters which is 4% higher than the minority Pell recipients’ graduation for similar Pell award periods. Rural locales graduation for minority students is 10% for 12 semesters and 12% for 18 semesters.

Minority females during this time period (1996-2003) made up approximately 17% of the total rural Pell enrollment. The graduation rate for this population was 23% within 12 semester and 28% within 18 semesters. While this demographic matriculation rate is on track with females for the VCCS system, the graduation rate is better than the graduation rates of other subgroups including overall VCCS Pell recipients, rural Pell recipients, VCCS minority Pell recipients and rural minority Pell recipients. Essentially, this group could be disproportionately affected by the federal changes.

**Impact of Pell Grant Rule Changes on Rural VCCS**

**Impact on College Revenue:** For the study period of 1996-2003, approximately 47% or 78,901 students out of total 166,302 students, who enrolled in Virginia’s rural community colleges, received Pell Grant monies. The enrollment figures include duplicated headcount of the students which consists of students who attended the college over multiple semesters during the 8 year period. That is, 166,302 is the number of student-semester over the study period in the VCCS.

Available data show that of 78,901 rural students receiving federal aid, 7% were enrolled at the VCCS rural community colleges after 12 semesters. The 7% loss of enrollment would result in 7% decrease in tuition collected by the already financially strained rural community colleges or approximately 3% decline in the tuition revenues collected by rural VCCS. As hypothesized in an earlier section, the new federal Pell Grant rules will likely have a negative impact on the community colleges’ enrollment. To test this hypothesis, two tailed t-Test was conducted with the null hypothesis that the new Pell Grant rule which reduces the
maximum number of semesters of eligibility will have no impact on overall college enrollment in Virginia’s rural community colleges. The t-Test results were statistically significant, with a p-value close to zero (p=2.5409E-27), indicating that the null hypothesis is rejected. Therefore, it can be concluded that reduction of Pell eligibility from 18 to 12 semesters will have a significant impact on rural VCCS enrollment and revenues.

The impact of Pell Grant rule change on enrollment becomes even more significant as the student demographics are evaluated. Female minority students make up over 9% of the students receiving Pell funding enrolled in Virginia’s rural community college system after 12 semesters. This raises the burden on the minority female students as a group and many of these students may be forced to abandon their college dream given that in-state tuition rates already averaged 5.8% increase at public two-year institutions (Zumeta, 2003).

Impact on Graduation Rate: The new federal Pell Grant rules is also likely to restrict degree attainment among needy students in rural areas. From 1996 to 2003, 12,872 students enrolled in the Virginia’s rural community college system completed their degree requirements within 18 semesters. Of the 12,872, approximately 46% or 5,908 of the students received Pell Grant assistance. Approximately 13% of the 5,908 Pell Grant recipients s graduated after 12 semesters in rural VCCS. The new federal Pell Grant rules likely to have a negative impact on the community colleges’ enrollment. To test the hypothesis that the new Pell Grant rule which reduces maximum number of semesters of eligibility will have no impact on overall college enrollment in Virginia’s rural community colleges, a two tail t-test was conducted. The t-Test results were statistically significant, with a p-value close to zero (p=0.00011), indicating that the null hypothesis should be rejected. Therefore, it can be concluded that reduction of Pell eligibility from 18 to 12 semesters will have a significant impact on rural VCCS graduation rate.

The impact of this rule change on graduation rate becomes even more significant as the student demographics are evaluated. As the student demographics are synthesized, minorities’ students share increases from 13% to approximately 15% of the students who graduate after 12 semesters. For female minorities’ student this share increases to 16%. The 16% of female minorities’ students receiving federal aid while attending rural VCCS that completed their degree requirements after 12 semesters equates to approximately 7% of total female minority students not being able to attain a degree if federal funding is unavailable after 12 semesters.

CONCLUSIONS AND FUTURE RESEARCH

In 2011, Congress mandated several changes to the Pell Grant program, one of which was the reduction in maximum lifetime eligibility from 18 semesters to 12 semesters. At this juncture, the real impact of the changes in Pell that went into effect fall semester 2012 is uncertain for Virginia’s rural community colleges.
While one of the key objectives that the VCCS has outlined for all of its 23 community colleges is to produce more graduates, currently the 14 rural community colleges are experiencing a downtrend in enrollment.

This research shows that the new Pell policy could potentially result in a 7% loss in enrollment or approximately 4% decrease in tuition collected for rural VCCS. This research also suggests that the Pell Grant modifications will have an impact on graduation rates (13% reductions) based upon historical data from 1996-2003. The study results support the claim that Pell Grant modifications will substantially impact enrollment and graduation rates in rural community colleges in Virginia.

This research also infers that this policy will restrict educational attainment among needy students. Rural locales serve an underprivileged, underserved population that is sensitive to any reduction in aid. Furthermore, when a reduction in aid is combined with students starting college underprepared to matriculate and requiring remedial coursework, the impact could be substantial and alarming in the long run.

Future research needs to be conducted that examine later cohorts as the data is made available and to include other variables such as employment rates and remedial coursework incidence. Students who transferred, stopped-out or dropped-out are excluded in the analysis in this paper. Also, data was lacking for the students who took a break from school, changed majors, study abroad or other reasons that extend their matriculation. Future research must include these factors to understand further the impact of financial aid policy changes.

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