ACADEMY OF EDUCATIONAL LEADERSHIP JOURNAL

Michael Shurden
Co-Editor
Lander University

Susan Shurden
Co-Editor
Lander University

Authors execute a publication permission agreement and assume all liabilities. Neither Jordan Whitney Enterprises, Inc. nor Allied Academies is responsible for the content of the individual manuscripts. Any omissions or errors are the sole responsibility of the authors. The Editorial Board is responsible for the selection of manuscripts for publication from among those submitted for consideration. The Publishers accept final manuscripts in digital form and make adjustments solely for the purposes of pagination and organization.

The *Academy of Educational Leadership Journal* is owned and published by Jordan Whitney Enterprises, Inc. 51 Blake Drive, Arden, NC 28704, USA. Those interested in communicating with the *Journal,* should contact the Executive Director of the Allied Academies at info@.alliedacademies.org.

EDITORIAL REVIEW BOARD

EDITORIAL REVIEW BOARD

TABLE OF CONTENTS

LETTER FROM THE EDITORS

Welcome to the *Academy of Educational Leadership Journal.* The editorial content of this journal is under the control of the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The mission of the *AELJ* is to publish theoretical, empirical, practical or pedagogic manuscripts in education. Its objective is to expand the boundaries of the literature by supporting the exchange of ideas and insights which further the understanding of education.

The articles contained in this volume have been double blind refereed. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies.

We intend to foster a supportive, mentoring effort on the part of the referees which will result in encouraging and supporting writers. We welcome different viewpoints because in differences we find learning; in differences we develop understanding; in differences we gain knowledge and in differences we develop the discipline into a more comprehensive, less esoteric, and dynamic metier.

Information about the *Journal* and the Allied Academies is published on our web site. In addition, we keep the web site updated with the latest activities of the organization. Please visit our site and know that we welcome hearing from you at any time.

<div align="right">

Michael Shurden
and
Susan Shurden
Co-Editors

www.AlliedAcademies.org

</div>

GUIDELINES FOR MEETINGS AND PRESENTATIONS IN SECOND LIFE

Khalid M. Dubas, Mount Olive College
Jackie Hill, Mount Olive College

ABSTRACT

While the 2D world of Course/Learning Management Systems (C/LMS) like Blackboard/WebCT, Sakai, Desire2Learn (D2L), Moodle, etc. provide rich resources for online interaction/learning/educating, these resources are limited for establishing real time interaction among participants. Among several 3D virtual worlds, the Second Life (SL) has emerged as an important platform for presentations, meetings, and conferences. Many universities have established 3D virtual campuses in SL and many businesses operate in SL as well. IBM, for example, has been a leader in SL where it operates over 50 islands and holds conferences and meetings with employees, and sales meetings with prospective/current customers. While C/LMS support distance education, these systems are limited to interaction among participants in a 2D world. However, SL offers a much richer interactive environment that can be combined with a traditional C/LMS. In fact, SLoodle integrates the strengths of Moodle with SL and is in the free domain. This manuscript discusses the many uses and benefits of SL for online meetings and conferences and presents guidelines for new users of SL in an educational setting.

INTRODUCTION

Challenging Economic Times

Many governments, for-profit, and non-profit organizations throughout the world are facing limited resources to meet existing demands. The adverse economic conditions in the US and in much of the world have created challenges for US organizations. As of June 2012, the U.S. total national debt was $15.87 trillion. The Congressional Budget Office projects a $1.1 trillion federal budget deficit for fiscal year 2012. For the last several years, the US total national debt has been increasing along with increases in the federal deficits. In addition, many states have been running deficits for a few years and will continue to do so for some time (CNN, 2011). The financial situation is not much better for many businesses and non-profit organizations. There are strong incentives in most organizations to reduce expenses while maintaining or increasing productivity. Many universities and colleges are faced with limited resources to serve

an increasing student population. This calls for innovative solutions to current problems and challenges.

One way to more efficiently utilize scarce resources is by offering online courses and degree programs and many educational institutions either already offer such programs and/or have plans to start offering such programs. Typically, such online programs utilize the Course/Learning Management Systems (C/LMS) like Blackboard/WebCT, Moodle etc. While quite useful than simply web-based alternatives, these C/LMS are for the large part limited to the use of two dimensional technologies; they support interactive teaching/learning opportunities but such interactions are limited compared with what could be accomplished in a virtual 3D environment. After all, people are 3D and interact more naturally in a 3D world whether virtual or real. There are many virtual worlds (http://www.virworld.com/virtual-worlds-directory/) and Second Life (SL) is the most mature 3D virtual world and is best suited for educational organizations. The Destination Guide for SL http://secondlife.com/destinations/learning lists 75 Educational & Non-Profit Organizations that have a presence in SL at this time.

Linden Lab, based in San Francisco, is the creator of Second Life. Over time, their SL viewer has become very user friendly and Linden Lab provides a lot of helpful information within the SL viewer and also at the SL website. In addition, books by Rymaszewiski et al. (2009), Rufer-Bach (2009), and Wood (2001) provide an excellent introduction to the various aspects of SL and serve as a good reference for the new comers to SL.

Purpose and Scope

We will describe here various uses and benefits of a virtual world like SL. We will also present guidelines for effective use of SL for meetings and presentations in SL and a list of places to visit in SL. These guidelines are developed based on our experience from the use of SL at Mount Olive College in North Carolina and elsewhere during the last three years.

MANY USES AND BENEFITS OF SECOND LIFE

Uses of Second Life

The possibilities for learning in SL are limited only by the imagination of the learners. Ussery (2010) presents utilization of SL at Texas State Technical College, Abilene, Texas. To this we might add other activities like teaching in SL, selling in SL through a retail store, socializing like joining dance clubs, creating families in SL with virtual spouses and even virtual children. Other uses could be product design, test marketing, conducting training of airplane flight; learning or teaching a foreign language. Atkinson (2009) mentions numerous resources in SL and provides a SL Activity Rubric that includes beginning activities, intermediate activities, and a final activity. He postulates that the use of constructivist content and social interactions

may result in robust learning environments that better engage learners in SL compared with the traditional situations that involve simply viewing the media or communication by e-mail, text-based chat rooms, or traditional classrooms.

The various activities in SL can be categorized through interaction with context and persons. Here we list various affordances of SL for education (Molka-Danielsen, 2009; Warburton, 2009):

- Extended or rich interactions, community presence, role plays, and simulation
- Collaboration – on shared tasks
- Conferences and business meetings
- Campus representations
- Exhibits in sciences such as astronomy, physics, etc.
- Job interviews – learning to participate in such
- Libraries, Museums, etc. – interactions with
- Political campaigns, activism, social awareness
- Performances – live or recorded, music or other
- Re-enacted scenarios- murder mysteries
- Reflection – while sitting on a virtual cloud or in a virtual church
- Role play – arts, history, health, business
- Social interactions – meet with friends, work together on homework
- Language and culture immersion
- Story telling – dialogue and structure
- Virtual offices – meeting places with students or clients
- Content that is historically lost, too expensive to build in real world, or imaginary
- Design and building a 3D environment
- 3D Art experiences
- 3D Data visualization
- 3D Modeling of ships, the body, buildings, campuses
- Content production
- Creating immersive context, scripted tools
- Self-paced tutorials
- Machinima construction

Benefits of Second Life

There are many benefits of using a virtual world like SL. Organizations can save significant amount of money by holding meetings and conferences in SL. Linden Lab (2009)

reports significant savings by IBM that were realized by holding its annual conference of technology within SL. They reported no jet lag, no decrease in productivity by employees being away from their desks, and no costs for travel or rental of conference facilities. Similar benefits can be achieved by academic organizations. In addition, many shy students are more likely to participate in discussions and make presentations without feeling psychological hurdles that they would otherwise face in a real world classroom. Faculty can hold office hours in SL, invite guest speakers to their classes, instructors and students can make PowerPoint presentations, and even graduation ceremonies can be held in SL for students in online distance education programs who would otherwise not travel across the country or across the world to attend graduation ceremonies. There are continuous improvements in information technologies and if Moore's Law continues to hold true then the computing power will continue to increase while computers would continue to become cheaper over time. Also, improvements in software and other electronic technologies would make avatars in SL look and behave more like real individuals in the real world. In addition, better technology and improved software make products more user-friendly by lowering the entry threshold.

Unlike in the traditional classroom setting, the key to successful learning in online courses is establishment of a learning community among students (Palloff & Pratt 2007). This can be achieved much more effectively through a 3D virtual world in combination with a C/LMS than simply a C/LMS which is a 2D world that limits interaction among participants and offers a limited shared experience to participants. Those who utilize, for example, Moodle C/LMS would benefit by adding SL to their learning environment. In fact, SL has been integrated with Moodle through SLoodle (Simulation Linked Object Oriented Dynamic Learning Environment) that, like Moodle, is a freeware that can be downloaded and installed on college servers.

INTRODUCING SECOND LIFE AT MOUNT OLIVE COLLEGE

Mount Olive College (NC) is a small private liberal arts college that has several locations in eastern North Carolina. We purchased a parcel of land (1,024 m^2) on the Mainland Region in SL and created an open-air classroom on it. This classroom is at located at http://maps.secondlife.com/secondlife/Noonkkot/134/8/49. We built a seating area and a placed a slide viewer in front of the seats for presentations. Starting in spring 2011, we introduced SL into some of our undergraduate marketing courses. Instructors, students, librarians, guest speakers, visitors, or any other avatars can hold a meeting, a conference, or attend a presentation in this classroom in SL.

Mount Olive College utilizes the Moodle course management system for its seated and online courses. Since we already utilize Moodle and have started to utilize SL, we plan to introduce SLoodle to our faculty and students in the near future. It is, of course, important to note that SL is not intended to replace Moodle but only to enhance it, as is accomplished through the integration of these two technologies into SLoodle.

Introducing Online Library Resources to Students in Online Courses

We frequently invite our reference librarian to introduce the library resources to students in our seated and online classes. In our online courses that utilize SL, the instructor has often invited a librarian to introduce our students to the online resources at the library. The librarian utilizes the slide viewer and voice communication to introduce students to the various online resources of our library. In these sessions, the librarian, instructor, and students interact by utilizing voice and text communication. At the end of these presentations, the librarian typically utilizes the Survey Monkey website to solicit students' reactions to her presentation. The students have also expressed their opinions through text-based chat communication and by filling out note cards that they then give to the avatars of the librarian and the instructor. The students' reactions have been very positive and they have encouraged us to continue to utilize the SL resources to enhance online education.

Figures 1-2 present two photos taken from a meeting in SL where an MOC librarian presented online library resources to students in a classroom; all participants were represented through their avatar in SL.

Figure 1: A PowerPoint Presentation in Second Life

Figure 2: A Presentation in Second Life about the APA Resources
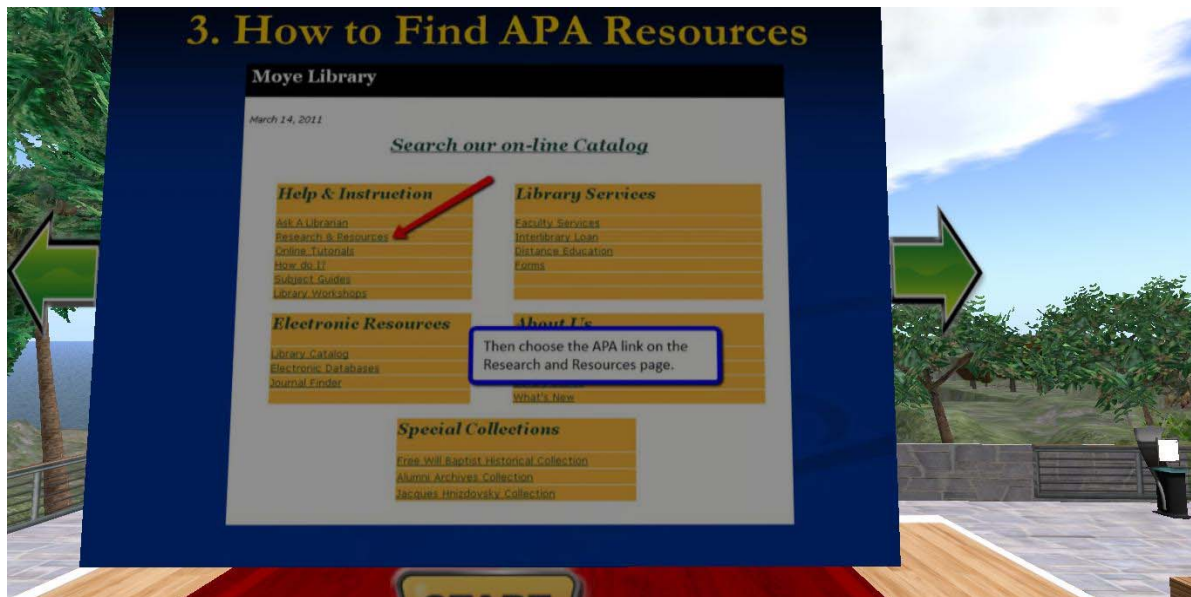
Student Presentations in SL

Our students have made numerous online Power Point presentations in SL at the above classroom through their avatars. Students typically developed their Power Point presentations and e-mail them to their instructor who uploads them into the slide viewer at the classroom in SL. For example, several students in a recent undergraduate International Business Management course have made presentations in SL on the following topics:

- Eiffel Tower, landmark at
  http://maps.secondlife.com/secondlife/Paris%20Eiffel/27/106/23

- Mount Rushmore, landmark at
  http://maps.secondlife.com/secondlife/Magic%20Folsom/220/163/60

- Red Square, Moscow, landmark at
  http://maps.secondlife.com/secondlife/Moscow%20Island/128/190/22

- The Great Wall of China, landmark at
  http://maps.secondlife.com/secondlife/China%20Sichuan/131/15/24

- St. Leo University, Florida, landmark at
  http://maps.secondlife.com/secondlife/St%20Leo%20University/3/126/23

- New York – various places of interest

- White House – replica at a landmark in New York

- Use of Second Life by the US Military - various landmarks

Office Hours in SL

The lead author of this article often holds office hours in SL for online courses. This provides students an opportunity to meet with their instructor in a virtual 3D environment to communicate using chat and/or voice to discuss various topics of interest in the course.

PREPARATION FOR MEETINGS AND PRESENTATIONS IN SECOND LIFE

Based on our reading of the literature and experience in introducing SL to enhance student engagement and learning at MOC and elsewhere, we present here some guidelines for the proper use of SL for new users. These guidelines should be helpful to instructors and students who seek a quick and efficient introduction to SL:

- Learn about Second Life.
- Download and install a SL viewer and other viewers.
- Logon to SL website and create an avatar.
- Learn the Basic Skills for Second Life.
- Travel in Second Life.

Next, we present more detail about each of the above steps.

Learn about Second Life

We request our students to learn about SL by reading some news articles and by viewing some YouTube videos about how various organizations utilize SL. Students are requested to:

- Visit Linden Lab's website at www.secondlife.com to learn about SL by choosing "What is Second Life" from the drop down menu. Also, use "Destination Guide" at this website to select places to visit in SL. This "Destination Guide" lists

thousands of organizations in various categories including 75 Educational and Non-Profit Organizations.

- View this YouTube video about Duke University School of Nursing in Second Life at http://www.youtube.com/watch?v=sL3D-59MbnY.
- Watch "Second Life Tutorial: Beginner Guide-Create Account & Get Started in Second Life" at http://www.youtube.com/watch?v=2zAb4XxnVMM. It is somewhat old (2008) but still useful.

Students at MOC utilize Moodle C/LMS and some are familiar with some 3D virtual world. We inform them that Second Life and Moodle have been integrated into SLoodle (http://www.sloodle.org/moodle/) that offers rich possibilities for enhanced online education. At present, we do not utilize SLoodle at MOC.

Download and install a SL viewer and other viewers

Go to Linden Lab's website at http://secondlife.com/ to download and install SL Viewer 3 which is available at the lower right hand side of their landing page. Students may also install a third-party viewer, however, these viewers are not supported by Linden Lab so there is some risk in using them and we ask students to download and install third-party viewers at their own risk from this website: http://wiki.secondlife.com/wiki/Third_Party_Viewer_Directory. It is a good idea to install more than one viewer on your computer in case one viewer crashes or requires an update and does not let you go to SL in time for a meeting. Linden Lab often updates its official viewer and if an update is due then an existing version of the SL viewer will not launch unless it is updated to the lasted version. So, if it is installed on organizational/ campus computers then the IT staff may not be willing to update the software every time an update is introduced by Linden Lab for its SL viewer. However, those organizations that utilize virtualization technology from VMware or Citrix Systems, may easily update the SL viewer whenever required by updating it in their servers and do not have to update each desktop computer in various computer labs. Also, if students and faculty members utilize their own notebook computers for accessing SL then they can update the SL viewer as soon as an update is available and required without having to seek help from the IT staff at their organizations.

Logon to SL website and create an avatar

Students are then instructed to launch their SL viewer, create an account, create an avatar in SL, and to go through the orientation session in SL. They are advised to choose a name for their avatar that is tasteful and easy to remember. Once created, they cannot change this name in SL. They should avoid a name like "a2570xnt" that creates unnecessary complexity. Students are requested to post their actual names and their avatar's names at the appropriate Discussion

Forum at the course site in Moodle. They are informed that their instructor's SL avatar is called Alpha Iceghost.

Learn the Basic Skills for Second Life

After completing this initial training in SL, students avatars arrive at the Mainland Region in SL. Students are also requested to improve their basic skills in these areas: navigation, communication, and making a transcript of text-based communication in SL. They are introduced to the concept of Machinima and are provided many landmarks to visit in SL. Specifically they should go through "What is Second Life?" at www.secondlife.com; also, refer to the Help menu of the SL viewer or the help menu at http://secondlife.com/ to learn the basic skills in SL. There are many YouTube videos about these skills as well. They are also requested to learn to use various controls in their SL viewer to do the following activities:

- Control Sun's orientation so you could control light/brightness of your surroundings
- Navigation (sit, stand, walk, run, fly, teleport)
- Communication (instant message, chat, microphone)
- Search for interesting places, people, etc.
- Selecting a landmark
- Zoom in and out of an object using controls at the viewer menu and the keyboard
- Take photos of yourself and others
- Learn the difference between a PC and a Mac keyboard

Travel in Second Life

Students are requested to be polite and courteous with avatars in SL and treat them like they would treat other people in the real life. Like the real life, there are some parts of Second Life that are best avoided so students are advised to use their common sense about the areas that they choose to visit. They are then provided addresses for several places to visit in SL. Here are some of these recommended places in SL.

- To visit our classroom in SL, type or copy the following landmark address at the top of your SL viewer and press enter to get to that classroom in SL. If asked to teleport to this address, then press teleport button to get there. Our classroom in SL is located at http://maps.secondlife.com/secondlife/Noonkkot/133/7/49.
- Ernst &Young has recently awarded $500,000 to NSCU College of Management for projects in SL. It is very interesting to observe the outcome of this work in SL. Search for and teleport to the NCSU virtual campus in Second Life (NCSU Management Accounting) and go through their orientation about Second Life.

Visit their "Walk Through Accounting History." Visit the rest of this virtual island. Here is their address: http://poole.ncsu.edu/index-exp.php/news/article/college-of-management-ernst-young-second-life-presence/

- Visit International Schools Island by searching for it in your viewer. Once there, get a free copy of a Universal Translator that would let you speak with avatars who speak a language other than English.
- Visit Help People Island to meet helpers who will answer your questions about SL at http://maps.secondlife.com/secondlife/Help%20People%20Island/41/44/24.
- A free Universal Translator is available at http://maps.secondlife.com/secondlife/International%20Schools/65/93/25
- NC State University – Pool College of Management http://maps.secondlife.com/secondlife/NCSU%20Management%20Accounting/235/159/26
- The University of North Carolina at Chapel Hill – UNC CH General http://maps.secondlife.com/secondlife/UNC%20CH%20II/69/130/36
- Russian Red Square – Moscow Island http://maps.secondlife.com/secondlife/Moscow%20Island/128/190/22
- CNN iReport News Hub – CNN iReport Island http://maps.secondlife.com/secondlife/CNN%20iReport%20Island/98/96/25
- Dell City – Dell Island http://maps.secondlife.com/secondlife/Dell%20Island%204/3/162/24
- Dell Conference Center – Dell Island http://maps.secondlife.com/secondlife/Dell%20Island%202/241/81/24
- IBM Italia – Official presence of IBM in Italy. http://maps.secondlife.com/secondlife/IBM%20Italia/85/237/25
- New Media Corporation – NMC Campus West http://maps.secondlife.com/secondlife/NMC%20Campus%20West/248/127/23

CONCLUSION

The resources available in a C/LMS can be significantly enhanced through the use of SL. Second Life offers an excellent opportunity for enhancing student learning through better engagement in a 3D virtual world. The skills and enthusiasm levels vary from one student to another student and the instructor is encouraged to be patient with those students who are less motivated or are slow learners. A discussion forum in a C/LMS that allows students to blog about their experiences in SL is helpful for everyone in a course. It may be helpful to assign points for activities in SL to encourage student participation. A five-stage model of teaching and learning in SL (Salmon, Nie & Edirisinga, 2010) is summarized below to serve as the next stage for students and educators who have utilized the guidelines given above.

1. Access and motivation – download software, create avatars, learn basic skills
2. Online socialization – personalizing avatars and using artifacts
3. Information exchange – communicating with others
4. Knowledge construction – collaborating through building and interacting with others to reach common goals
5. Development – reflection on personal experience in SL and relating to real life

REFRENCES

Atkinson, Tom (2009). Second Life for educators: Instructional resources," *TechTreands,* 53(4), 23-25.

CNN (2011). "State budget deficits." Retrieved on July 8, 2011 from http://www.cnn.com/interactive/ 2011/02/politics/table.state.budgets/.

Liden Lab (2009). *Case study: How meeting in Second Life transformed IBM's technology elite into virtual world believers.* San Francisco, CA: Linden Research, Inc.

Molka-Danielsen, J. (2009). "Chapter 1: The new learning and teaching environment, 13-25. In J. Molka-Danielsen, & M. Deutschmann, Eds., (2009). *Learning and teaching in the virtual world of Second Life.* Trondheim, Norway: Tapir Academic Press.

Molka-Danielsen, J. & M. Deutschmann, Eds., (2009). *Learning and teaching in the virtual world of Second Life.* Trondheim, Norway: Tapir Academic Press.

Palloff, R. M. & K. Pratt (2007). *Building online learning communities: Effective strategies for the virtual classroom.* San Francisco, CA: Jossey-Bass; John Wiley & Sons.

Rufer-Bach, K. (2009). *The Second Life grid: The official guide to communication, collaboration, and community engagement.* Hoboken, NJ: John Wiley & Sons.

Rymaszewski, M., W. Au, C. Ondrejka, R. Platel, S. Gorden, J. Cezanne, P. Cezanne, B. Batstone-Cunningham, A. Krotoski, C. Trollop & J. Rossignol (2009). *Second Life: The official guide.* Indianapolis, IN: Wiley.

Salmon, Gilly, Ming Nie & Palitha Edirisinga (2010). Developing a five-stage model of learning in Second Life," *Educational Research,* 52(2), 169-182.

Ussery, J. (2010). Putting the "real" in virtual reality for educators and students. *Journal of Virtual Studies*, 1(1), 12-18.

Warburton, S. (2009). Second Life in higher education: Assessing the potential for and the barriers to deploying virtual worlds in learning and teaching. *British Journal of Educational Technology,* 40(3), 414-426.

Wood, N. T. (2011). *Marketing in virtual worlds.* Upper Saddle River, NJ: Prentice Hall.

LEADERSHIP BEHAVIOR AND ITS IMPACT ON STUDENT SUCCESS AND RETENTION IN ONLINE GRADUATE EDUCATION

Doris Gomez, Regent University

ABSTRACT

Student attrition, although some to be expected, comes at a high cost. Failure to complete studies is recognized as a personal loss for the individual, an economic loss for the universities, and an intellectual loss for society. While extensive research efforts have been used to develop and improve theoretical models of student retention or persistence, a concern of many administrators remains the ability to predict as early as possible the likelihood of a student dropping out of school. Following these recommendations, this present study employed the analysis of secondary and program specific data to examine the predictive impact of student characteristics on persistence in an online doctoral leadership program. This research examined individual differences that exist in the leadership development of doctoral students that would contribute to and predict success and persistence in leadership development programs. The study has used a logistic regression to test whether critical thinking, leadership effective behavior, Master's GPA, gender, application summary score, and psychological type are positively related with academic retention/completion amongst doctoral students enrolled in an asynchronous-distance program in leadership studies. Findings emphasize the importance of behavioral characteristics, such as effective leadership and psychological type, in regard to persistence. LPI-Modeling the Way emerged as a significant predictor for retention and persistence in the online doctoral leadership studies program, a finding that - to this date - did not surface in any other research pertaining to retention or persistence. As such, this article focuses on the impact of effective leadership behavior in general and Modeling the Way in particular and why it is, indeed, a significant factor in student success and retention

INTRODUCTION

Student attrition, although some to be expected, comes at a high cost. Failure to complete studies is recognized as a personal loss for the individual, an economic loss for universities, and an intellectual loss for society. While extensive research efforts have been used to develop and improve theoretical models of student retention or persistence, a concern of many administrators remains the ability to predict as early as possible the likelihood of students dropping out of school.

Research findings suggest that the strongest predictor of graduation is a student's conformity with the characteristics of those who have graduated from the same institution or program previously (Ash, 2004; Mansour, 1994). Institutions routinely collect a broad array of information on their students' backgrounds, socioeconomic status, past academic achievement, social involvement, and even personal characteristics. All factors that align well with the major theoretical models of student retention (Ash, 2004; Astin, 1984; Bean, 1985; Mansour, 1994; Tinto 1987, 1993). Several researchers therefore contend to make institution-specific predictions about retention and attrition based upon the increasing amount of student assessment data that are being collected by institutions of higher education (Seidman, 1995; Johnson, 1997; Murtaugh, Burns & Schuster, 1999). Their research indicates that analysis of readily available student data specific to a particular university and program can, indeed, be a valid predictor for student persistence and retention. Johnson (1997) suggested that each institution create its own predictor equations based on the characteristics of students who have succeeded in the past. Knowledge of students who are most likely to succeed and who are at risk to drop out may provide administrators and educators with the information necessary to develop strategies that encourage, guide, and motivate students through to degree completion. Once specific characteristics or tendencies are recognized, effort can be directed toward the development of programs and practices to help students overcome weaknesses and encourage a greater level of persistence.

Following these recommendations, this present study employed the analysis of secondary and program specific data to examine the predictive impact of student characteristics on persistence in an online doctoral leadership program. In the causal-comparative, ex-facto study, a logistic regression analysis was used to predict retention probability and identify student profiles with a higher likelihood of leaving the program prematurely. The sample for this study included doctoral students who enrolled in a multi-disciplinary online doctoral program in organizational and in strategic leadership at a private graduate university. Data for this study was collected from students who entered the program beginning in 1997 to 2006 and have since either dropped out or graduated. The subjects of this study are career professionals in various for-profit and non-profit organizations and range in ages from mid-twenties to late fifties. A total sample size of 303 students represented the full population of incoming students for the doctoral program out of whom 179 graduated and 124 attrited. In the graduated group, 113 were male and 66 were female. In the attrited group, 86 were male and 38 were female.

The literature review provided the justification for the selection of the independent variables used in the study. Each independent variable chosen has a theoretical relationship to retention. Graduation, an accepted standard of academic achievement, was used as the dependent variable in exploring the study questions. By utilizing the institution's database system, the following student demographic data was obtained and used as independent variables in this study:

Gender
Master's Level Grade Point Average (MGPA)
Application Summary Score (APSS)
Critical Thinking - measured by the Watson Glaser Critical Thinking Assessment (WGCTA)
Effective Leadership Behavior - measured through the Leadership Practices Inventory (LPI)
    Challenging the Process (LPI-CHALL)
    Inspiring a Shared Vision (LPI-INSP)
    Enabling Others to Act (LPI-ENAB)
    Modeling the Way (LPI-MODL)
    Encouraging the Heart (LPI-ENC)
Psychological Type - based on the Myers-Briggs Type Indicator (MBTI)
    Extroversion (MBTI-E)
    Introversion (MBTI-I)
    Sensing (MBTI-S)
    Intuition (MBTI-N)
    Thinking (MBTI-T)
    Feeling (MBTI-F)
    Judging (MBTI-J)
    Perceiving (MBTI-P)

Each of these variables can be associated with the concept of persistence and relate to characteristics that already existed at the time of matriculation of the student. While the list of characteristics associated with the concept of persistence is far more extensive, this group begins to offer insight about the significance of some of these selected variables for persistence for online doctoral leadership studies programs. Findings showed that Master's GPA had no statistical significance on an individual's ability to persist. Application summary scores were negatively related to a student's desire and willingness to persist to degree completion. Those with higher application summary scores were more frequently among those who left the program prior to degree completion. While some of the variables, such as critical thinking skills and psychological type, showed to contribute to an individual's academic performance and subsequent decision to continue or drop-out, the findings of this study highlighted the central role of the effective leadership behavior of *Modeling the Way*.

Modeling the Way emerged as the single most significant predictor of persistence and success in the online doctoral leadership program. As such, this article will focus on the impact of specific leadership behavior in general and *Modeling the Way* in particular and why this construct, indeed, is a significant factor in student success and retention.

EFFECTIVE LEADERSHIP BEHAVIOR

While the literature on retention does not directly address the influence of students' effective leadership behavior and their persistence in educational endeavors, a review of closely related constructs, such as self-confidence, self-regulation and self-efficacy, were found to greatly impact retention and persistence. These constructs and their effects on student retention are discussed in the following section.

One of the most frequently reported findings in the leadership literature is the relationship between a leaders' self-confidence and their leadership effectiveness. In fact, every major review of leadership literature lists self-confidence as an essential characteristic of effective leadership behavior and performance (Bass, 1990; House & Aditya, 1997; Northouse, 2001, Yukl & Van Fleet, 1992). For example, in the sports-psychology field self-confidence is one of the most cited psychological factors thought to affect athletic performance (Feltz, 1988). Inspired by Bandura's (1982) seminal work on self-efficacy, McCormick (2001) proposed to connect the academic study of leadership to the well-developed literature on social cognitive theory. Social cognitive learning theory, inclusive of both an individual's self-efficacy perceptions and self-regulatory skills, places the focus on individuals' characteristics and provides a solid, pedagogically-based theoretical framework for research. This practice of substituting self-efficacy for self-confidence is understandable, considering the conceptual similarity of the two constructs. Bass (1990), for instance, declared: "Self-efficacy is closely allied with self-confidence" (p.155). Similarly, Manz (1986) proposed the model of self-regulation or self-leadership. Manz (1990) believed that self-leadership is a crucial element in leadership effectiveness and asserted that the first step in becoming an effective leader would be to become an effective leader of self. In short, self-leadership or self-regulation is the influence we exert on ourselves to achieve the self-motivation and self-direction we need to perform in order to achieve our personal goals and dream. As such, self-leadership theory emphasizes the important role we play in determining the impact of external influences on us. Thus, even when faced with even the most difficult situations, we lead ourselves by choosing which behaviors and attitudes we will utilize to respond to the situation. According to Kur (1997) self-leadership is where individuals act on their own to achieve their mission, vision, purpose, values, strategies, and goals. Without the desire and willingness to step forward that self-leadership provides, individuals will be less effective and successful in reaching their goals. Kouzes and Posner (1995) wrote, "Leadership is an art, a performing art, and the instrument is the self. The mastery of the art of leadership comes with the mastery of the self" (p. 336). Leaders search for opportunities to exceed their previous levels of performance as they regularly set their goals higher and understand that intrinsic motivation must be present if they are to do their best.

SELF-REGULATION

It becomes apparent that various authors support the notion that self-regulation provides a framework, which individuals can use to increase their levels of performance, resilience and goal commitment. Research across a variety of settings, from the educational domain to the airline industry, has shown that the practice of self-regulation can lead to a plethora of benefits including improved job satisfaction, self-efficacy, and performance.

Self-regulation involves the influence individuals exert over themselves to achieve the self-motivation and self-direction needed to behave in ways they choose, even though they might find it difficult to carry out the set goal or task (Anderson & Prussia, 1997). Bandura defined self-regulation as the "exercise of influence over one's own motivation, thought processes, emotional states, and patterns of behavior" (1994, p.71). For him, self-regulation is an internal mechanism that controls behavior and the self-imposed consequences attributed to that behavior. It allows for the gradual replacement of external controls of behavior by internal controls that govern which behavior is performed. This self-regulatory system mediates "external influences and provides a basis for purposeful action, allowing people to have personal control over their actions. Matthews, Schwean, Campbell, Saklofske, and Mohamed (2000) "conceptualize self-regulation as a generic umbrella term for the set of processes and behaviors that support the pursuit of personal goals within a changing external environment" (p. 173). "Self-regulation can be defined as the process by which a system regulates itself to achieve specific goals" (Shapiro & Schwartz, 2000, p. 253), and "is typically viewed as a systematic process of human behavior that provides individuals with the capacity to adjust their actions and goals to achieve desired results" (Jackson, MacKenzie, & Hobfoll, 2000, p. 275). In essence, self-regulation helps individuals to most effectively behave in ways consistent with their values and personal desires, in addition to any external demands that may be imposed on them by others.

Specifically, three distinct but complimentary strategies of self-leadership have been hypothesized: (a) behavioral focused strategies, (b) intrinsic motivation strategies, and (c) constructive thought pattern strategies (Anderson & Prussia, 1997; Manz, 1986, 1990). *Behavioral focused strategies* focus on behavior and are self-discipline orientated. This type of self-leadership relies on self-imposed strategies to perform difficult, unattractive, but necessary tasks. Manz believed that by using these behavioral focused strategies, an individual can promote and encourage successful behaviors and suppress unsuccessful behaviors in themselves. *Intrinsic motivation strategies* seek to create a positive identification with specific tasks that pulls an individual to high performance because that individual is committed to, believes in, and enjoys, the work for its own value. Finally, *constructive thought pattern strategies* are an internal approach focused on thinking. In general, these strategies include increasing an individual's focus and awareness on the pleasant, rather than the unpleasant, aspects of a given task (Anderson & Prussia, 1997). Constructive thought pattern strategies of self-leadership focus on establishing and altering thought patterns in desirable ways by using the specific strategies of: (a)

self-analysis and improvement of belief systems, (b) mental imagery focused on positive performance, (c) positive mental talk to motivate and facilitate performance, and (d) replacing negative mental scripts with positive ones (Manz, 1986). These psychological scripts provide internal rules and guidelines that naturally structure the work of an individual. As such, behavior is impacted not only by the consequences arising from external sources (e.g., externally inflicted rewards and punishments), but also by the individual's self-generated evaluative consequences that regulate behavior internally. Importance is placed on the capacity of individuals to regulate themselves, particularly when faced with difficult, yet important tasks. Thus, people set performance standards and respond to their own behavior in self-regulated or self-critical ways, in accordance to self-imposed demands (Bandura, 1977).

Bandura (1986), expanding on his model of social learning theory to specifically include the role that cognitive control plays in an individual's self-monitoring system, concluded that individuals possess a *self-system* that enables them to exercise a measure of control over their thoughts, feelings, and actions. He called this new expansion of social learning theory *social cognitive theory*.

According to social cognitive theory, beliefs that individuals hold about their abilities, and about the outcomes of their efforts, powerfully influence the ways in which they will behave, to the extent that even knowledge, skill, and prior accomplishments are often poor predictors of subsequent achievements. This view is consistent with theorists who have argued that beliefs are a filter through which new phenomena are interpreted and behavior is mediated (Mead, 1982). How individuals interpret their performance influences their self-beliefs, which in turn, influences their subsequent performances (Nauta & Kahn, 2000).

Much time, effort, and expense has been invested in studying self-regulation as it applies to academic learning. Bandura (1993) informed us that a major goal of formal education should be to "equip students with the intellectual tools, self-beliefs, and self-regulatory capabilities to educate themselves through their lifetime" (p. 136). Zimmerman (1989) stated, "students can be described as self-regulated to the degree that they are metacognitively, motivationally, and behaviorally active participants in their own learning process" (p. 329). Self-regulation, according to Zimmerman (2000), is defined as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (p.14). Adapting Zimmerman's definition to learning, Schunk and Ertmer (2000) defined self-regulated learning as "self-generated thoughts, feelings, and actions that are planned and systematically adapted as needed to affect one's learning and motivation" (p.631).

Palincsar and Brown (1989) wrote that students were self-regulated learners if they were aware of the variables that were important to their learning and their ability to control their learning environment. Later, Pintrich (2000) wrote that self-regulated learning is the application of models of self-regulation to issues of learning and that it "is an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the

environment" (p. 453). Zimmerman (1986) described students as being self-regulated learners as follows:

> "Metacognitively, self-regulated learners are persons who plan, organize, self-instruct, self-monitor, and self-evaluate at various stages during the learning process. Motivationally, self-regulated learners perceive themselves as competent, self-efficacious, and autonomous. Behaviorally, self-regulated learners select, structure, and create environments that optimize learning" (p. 308).

So, what distinguishes self-regulated learners from their counterparts is that (a) they are engaged in their own education and take responsibility for it (Alexander, 1995), (b) they have a greater continuing motivation to learn (Kinzie, 1990), (c) they do not work in isolation (Zimmerman & Risemberg, 1997), (d) they plan and set goals for their learning (Jonassen, 2000), (e) they plan their time and use it more effectively (Zimmerman & Risemberg, 1997), (f) they persist in their quest for knowledge, (g) they achieve more academically (Zimmerman & Bandura, 1994), (h) they more effectively adapt to the school and learning environment (Schunk & Zimmerman, 1998), and (i) they engage in learning in fundamentally different ways (Paris & Newman, 1990, p. 87).

Without a doubt, self-regulated learning plays a key role in learners' academic achievement and persistence. To overcome self-regulatory learning differences among students, courses have been constructed and books written that instruct learners in the various self-regulatory skills and techniques deemed critical in education. Studies have also shown that self-regulatory training results in gains in academic performance and retention, enhances perceptions of self-efficacy, and has an important role in the learning process (Bielaczyc, Pirolli, & Brown, 1995; Zimmerman & Risemberg, 1997).

SELF-EFFICACY

Self-efficacy with its roots in social cognitive theory (Bandura, 1986, 1992, 1994), is founded in a view of human agency in which individuals are proactively engaged in their own development and can make things happen by their own actions. Key to this sense of agency is the fact that individuals possess self-beliefs that enable them to exercise control over their thoughts, feelings, and actions. Since first espousing his social cognitive theory, Bandura has bestowed the central position of self-efficacy, progressing from a single chapter in his 1986 volume to an entire tome on the subject in 1997. In fact, Bandura discusses self-efficacy in almost every research article, chapter, and book that he has written. In a recent E. L. Thorndike Award Address (Bandura, 2000) he unequivocally stated the centrality of self-efficacy in his social cognitive theory thusly:

> "Social cognitive theory explains human functioning in terms of triadic reciprocal causation. In this model, internal personal factors in the form of cognitive, affective and biological events, behavioral patterns, and environmental events, all operate as interacting determinants that influence one another bidirectional. The

personal contribution to this triadic interplay operates mainly through mechanisms of agency; none is more central or pervasive than people's beliefs in their personal efficacy. This belief system is the foundation of human agency. Unless people believe they can produce desired results by their actions they have little incentive to act or to persevere in the face of difficulties" (p. 4).

Self-efficacy is not an assessment of a set of skills; it is not a measure of ability. Rather, it is a belief by the individual, about what that individual can attain under different conditions with the skills that they bring to the task (Bandura, 1997; Gist & Mitchell, 1992; Pajares, 1996). Or as Vancouver (2000) put it, "self-efficacy...is a judgment of one's capacity to perform at a given level" (p. 325).

Self-efficacy was found to determine the effort people will put forth and how long they will persist in a given task (Bandura, 1986; Schunk & Zimmerman, 1997). Our perceptions of our own ability to deal successfully with, and overcome, situations and challenges we face in life can have a major impact on our performance (Bandura, 1982). When people believe in their own ability to impact their own life, they are enhancing their effectiveness to produce their own future (Kazan, 1999). Bandura (1986) argued that self-efficacy could explain not only the choice or level of activity to engage in, but also the likelihood that one will persist to successful completion. "People with high assurance in their capabilities approach difficult tasks as challenges to be mastered […] they set themselves challenging goals and maintain strong commitment to them" (Bandura, 1997, p.71).

People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. They approach threatening situations with assurance that they can exercise control over these challenges and succeed in accomplishing the given task. This ongoing cycle will work to aid individuals in reaching higher and higher levels of excellence and achievements. Ultimately, high self-efficacy fosters a strong level of commitment to chosen activities.

The impact of self-efficacy on educational achievement and perseverance becomes increasingly apparent. In fact, findings have suggested that self-efficacy has (a) a powerful effect on goal level, task performance, goal commitment, and goal choice (Locke et al, 1984) and (b) has been identified as a predictor variable - distinct from cognitive competence - influencing performance in areas such as academic achievement and persistence.

This is not surprising, as self-efficacy also causes the more effective use of metacognitive strategies, such as planning and self-regulation; skills that become increasingly important as an individual progresses through educational levels to environments that are less ordered and constrained (e.g., college or university life, online learning).

Zimmerman, Bandura, and Marinez-Pons (1992) found that students with a sense of self-efficacy display greater persistence, effort, and intrinsic interest in their academic learning and performance. According to Bean and Eaton (2001), the critical attitudes that influence a student's

decision to persist or withdraw, are described by three theories: (1) *self-efficacy theory*, which is an individual's perception that they can act to achieve a desired outcome; (2) *coping behavioral theory*, which posits that it is through a process of assessment and adaptation that individuals adjust to new situations, and (3) *attribution theory*, where the key issue is the extent to which control is possessed by the individual, or is believed to lie outside their control. The authors asserted that among the most important of these psychological attributes is self-efficacy, as self-efficacy refers to the estimate of one's own abilities and is closely related to one's need for achievement (Bandura, 1991; Bean and Eaton, 2001; LeFrancois, 1995).

THE CONNECTION WITH ACADEMIC PERSISTENCE

As indicated above, self-regulation is deeply intertwined with the concept of self-efficacy (Zimmerman, 1990). As Schunk and Ertmer (2000) point out, "effective self-regulation depends on feeling self-efficacious for using skills to achieve mastery" (p. 635). Bandura (1994) stated unequivocally that the higher the self-regulatory efficacy the better the occupational functioning of the individual. This key determinant of self-regulatory behavior, self-efficacy, is present in all phases of academic self-regulated learning (Schunk & Ertmer, 2000; Zimmerman, 1989). Schunk and Ertmer (2000) noted, "effective self-regulation depends on students developing a sense of self-efficacy for learning and performing well" (p.632). The more self-efficacious the individual, the better learner they will be (Gist & Mitchell, 1992).

Self-efficacy for self-regulated learning influences the goals learners set, the learners' commitment, decisions the learners make to reach their goals, and their overall persistence. The more capable people regard themselves, the higher the goals they will set for themselves and the more persistent they will be in striving to attain these goals.

Learner perceptions of self-efficacy have a reciprocal relationship with the self-regulatory processes that affect motivation and performance. A high sense of self-regulatory efficacy enhances task performance efficacy, which in turn motivates further self-regulation in pursuit of further academic attainment. Self-regulatory efficacy, then, as well as general academic efficacy, is the result of interactions among personal, social, and environmental factors (Bandura, 1997; Schunk, 1989; Staples, Hulland & Higgins, 1998). Thus, the cognitive processes of self-efficacy and self-regulation have direct impact on learning in classroom situations (Bandura, 1997; Schunk, 1994; Zimmerman, 1989; Zimmerman, Bonner, & Kovach, 1996).

Researchers have demonstrated that effective, academic self-regulation demands that students have a sense of personal efficacy for their own self-regulatory abilities (Bandura, 1986; Zimmerman, 1989; Zimmerman, Bandura, & Martinez-Pons, 1992). An area that lends itself well to self-regulation is *distance learning,* where instruction originates at one site and is transmitted to students at distant sites. Self-regulation seems critical due to the high degree of student independence deriving from the instructor's physical absence. The ability of learners to regulate and direct their own learning is an important determinant of performance in any learning context;

however, it is of even greater significance in distance learning contexts where the extrinsic support structures typical of classroom-based learning are absent (Schunk & Zimmerman, 1997). Even more so than in traditional classrooms, self-efficacy and self-regulatory learning are crucial in distance education success, especially when asynchronous distance education is the primary method of instruction. Students who possess higher efficacy and are more self-regulated learners are therefore more successful at asynchronous distance education than students who have difficulties in areas of self-efficacy and self-regulated learning. Likewise, students who are self-regulators are more likely to enjoy and sign up for classes that are conducted using distance education.

Many researchers, while writing positively about the potential of online distance education, emphasize the need for those learners involved in it to possess well developed academic self-regulatory skills in order to benefit from its potential (e.g., Bandura, 1997; Doherty, 1998; Kearsley, 2000; Palloff & Pratt, 1999). Studies, examining self-efficacy as it relates to achievement and attitudes in a distance-learning environment indicate that student self-efficacy is influential on achievement, persistence and attitudes in a distance-learning environment. For example, Riddle (1994) studied factors that contributed to student satisfaction in courses delivered by interactive video networks, including learning styles, self-efficacy, and a host of demographic variables in the study. It was concluded that self-efficacy contributed to explaining the variance in student satisfaction in a distance education course.

For example, in a study of 712 distance learning students from the Open University of Hong Kong, Jegede, Taplin, Fan, Chan, and Yum (1999) reported that high achievers rated themselves significantly higher than low achievers in scales that measured self-efficacy in terms of confidence with studies (ES = .50) and ability to cope well with studying in distance mode (ES = .42). In a different research, Zhang, Li, Duan, and Wu (2001) studied 112 students enrolled in online courses at a university in China and discovered significant correlations among the students' distance learning self-efficacy, intrinsic motivation, and self-regulated learning skills. Joo, Bong, & Choi (2000), in a study of 152 junior high school students in Korea using web-based instruction, found that self-efficacy for self-regulated learning related significantly to student performance.

RESEARCH MODEL

The following model of relationships specifies the hypothesized relationships of independent and dependent variables and their indicators within a causal path diagram (see Figure 1). The plus (+) and minus (-) symbols indicate the direction of relationship as indicated in the review of the literature. Where those symbols are missing, the literature produced either conflicting results or did not address the specific direction of relationship.

All independent variables are tested as predictors for academic retention/completion amongst doctoral students enrolled in an asynchronous-distance program in leadership studies. These predictors are grouped into six main independent variables: WGCTA-Critical Thinking,

Figure 1: Theoretical model of relationships specifying the hypothesized relationships of independent, and dependent variables and their indicators within a causal path diagram
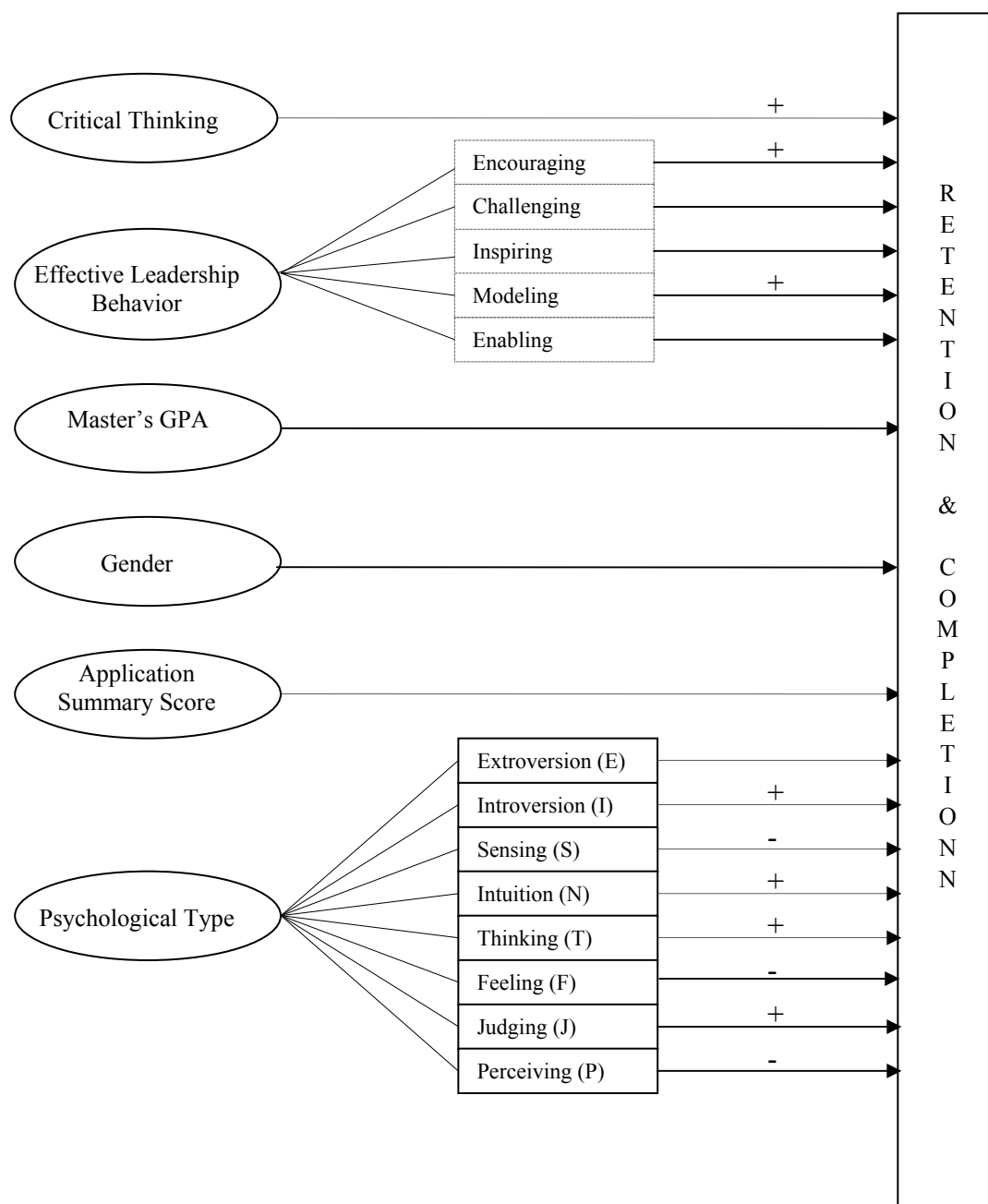
Leadership Effective Behavior, Master's GPA (MGPA), Gender, Application Summary Score (APSS), and Psychological Type. The Leadership Effective Behavior is further categorized into the following: LPI-Encouraging the Heart, LPI-Modeling the Way, LPI-Challenging the Process, LPI-Inspiring a Shared Vision, and LPI-Enabling Others to Act. The Psychological types are identified as MBTI-Extroversion, MBTI-Introversion, MBTI-Sensing, MBTI-Intuition, MBTI-Thinking, MBTI-Feeling, MBTI-Judging, and MBTI-Perceiving. Based on the model below (Figure 1), this research suggests a positive relationship between predictors and academic retention/completion:

Hypothesis 1: Critical thinking, Leadership Effective Behavior, Master s GPA, Gender, Application Summary Score, and Psychological Type are positively related with academic retention/completion amongst doctoral students enrolled in an asynchronous-distance program in leadership studies.

Hypothesis 2: There are significant differences between Attrited Cohort and Graduated Cohort in WGCTA Critical Thinking and LPI-MODL scores and gender.

Method

Sample

The two hypotheses were tested by conducting a quantitative study in one US graduate university. By utilizing the institution's database system, the following student specific data was obtained for incoming, first-year students included in the sample: gender, master's level

GPA, the institution's internally developed application summary score, as well as data collected from three different surveys administered during the students' first residency event at the beginning of their doctoral studies: critical thinking skills, psychological type, and effective leadership practices. All data were measures of characteristics, attitudes, skills, and values formed prior to enrollment.

The sample for this research comprised of doctoral students who enrolled in a multidisciplinary online doctoral program in organizational and in strategic leadership at a private graduate university. Data for this study were collected from students who entered the program beginning in 1997 to 2006 and have since either dropped out or graduated. The respondents were career professionals in various for-profit and non-profit organizations and range in ages from mid-twenties to late fifties. A total sample size of 303 students represented the full population of incoming students for the doctoral program out of whom 179 graduated and 124 attrited. In the graduated group, 113 were male and 66 were female. In the attrited group, 86 were male and 38 were female.

Variables

All the variables tested in this research were based on the existing literature. Each independent variable chosen has a theoretical relationship to retention. Graduation, an accepted standard of academic achievement, was used as the dependent variable. The following are independent variables used in this research:

- Gender
- Master's Level Grade Point Average (MGPA)
- Application Summary Score (APSS). The range of APSS is as follows: (0-1.99) reject, (2.00-2.09) accept space available, (2.10 – 3.00) accept.
- Critical Thinking - measured by the Watson Glaser Critical Thinking Assessment (WGCTA)
- Effective Leadership Behavior
  o Challenging the Process (LPI-CHALL)
  o Inspiring a Shared Vision (LPI-INSP)
  o Enabling Others to Act (LPI-ENAB)
  o Modeling the Way (LPI-MODL)
  o Encouraging the Heart (LPI-ENC)
- Psychological Type
  o Extroversion (MBTI-E)
  o Introversion (MBTI-I)
  o Sensing (MBTI-S)
  o Intuition (MBTI-N)
  o Thinking (MBTI-T)
  o Feeling (MBTI-F)
  o Judging (MBTI-J)
  o Perceiving (MBTI-P)

This research used the existing Leadership Practices Inventory (LPI) instrument, developed by Kouzes and Posner (1995), which is based on responses to the Personal-Best Leadership Experience Questionnaire (PBLEQ). The LPI yields five scales, each of which represents a separate set of leadership behaviors. Through in-depth analysis of the times when leaders perform at their best, Kouzes and Posner identified five practices most common in extraordinary leaders. When leaders are at their personal best they (1) challenge the process; (2) inspire a shared vision; (3) enable others to act; (4) model the way; and (5) encourage the heart. Reliability scores for the LPI self-assessment are reported as follows: challenging the process = 0.71; inspiring a shared vision = 0.81; enabling others to act = 0.75; modeling the way = 0.72; and, encouraging the heart = 0.85 (Kouzes & Posner, 1995). The LPI used a five-point Likert

scale, with ratings ranging from 1 (*rarely*) to 5 (*very frequently or almost always*). The instrument took approximately ten minutes to complete, either self-administered or computer scored.

Psychological Type was measured by the Myers-Briggs Type Indicator (MBTI). Building upon Jungian psychological type theory, Myers and Briggs (Myers & McCaulley, 1985) developed the Myers Briggs Type Indicator (MBTI), in which people are typed by their preferences with respect to four bipolar dimensions. These dimensions are: Extrovert (E) - Introvert (I); Sensing (S) – Intuition (N); Thinking (T) – Feeling (F), and Judging (J) – Perceiving (P). Due to the apparent value of MBTI preferences in predicting academic progress, this research proposes to explore the MBTI as a predictor of retention and attrition.

Data Analysis

Analysis was performed using computer software, Statistical Package for the Social Sciences (SPSS). As a first step, descriptive statistics were used to analyze the means, minimums, maximums and standard deviations of the continuous variables, such as the WGCTA score, the LPI scores, the Masters GPA, and the Application Summary Scores. Frequency tables were used to summarize categorical variables, such as MBTI preferences and Gender. In order to determine the significance of differences and their respective Type I and II error rates, paired comparison t-test statistics were conducted, based on the results of the initial descriptive statistics. Logistic regression was then used to predict retention and attrition based on identified independent variables. Logistic regression was performed using the entering cohorts as a population to be tested. A notable difference between using t-test and logistic regression is the population. T-test analysis uses two distinct populations and tests those populations against each other to determine the significant difference in presence or absence of a data characteristic.

Logistic regression is performed using two components of one population.

The dependent variable of success is represented as a dichotomy; subjects are categorized by whether or not they persisted to the point of graduation. Subjects who enrolled in courses but dropped out or stopped out of the program prior to graduation are included in the attrited category. Data for this variable are dummy-coded for the purposes of the statistical analysis.

Individuals who graduate are assigned a positive value; all other subjects are assigned the zero value code.

RESULTS AND DISCUSSION

Descriptive statistic data analysis produced the following preliminary profile: Graduates of the online leadership development program are 6.3% more likely to be female; have higher WGCTA scores by an average of 4.5%; have higher LPI Modeling scores by an average of 3.8%;

and exhibit higher percentages (avg. of 10%) in the MBTI categories of Introvert (I), Sensing (S), Thinking (T), and Judging (J).

Paired samples t-test statistics were conducted to test differences between Attrited Cohort and Graduated Cohort. For this statistic only WGCTA scores and LPI-Modeling the Way scores are the appropriate level of data for this statistic use. WGCTA-Critical Thinking scores as well as the LPI-Modeling the Way scores were significantly different between those that left the program prior to degree completion and those that graduated from the program with their doctoral degree. WGCTA shows a significance level of $p < 0.00$ which essentially indicates no chance for Type I error. LPI-Modeling the Way shows a significance level of $p = 0.106$, which indicates a 10.6% chance for Type I error. Thus, those that persist have significantly higher WGCTA-Critical Thinking scores than those that leave the program prior to degree completion (avg. 31.22 vs.29.81). Furthermore, these results indicate that those individuals that graduate from the doctoral leadership program have significantly higher LPI-Modeling the Way scores compared to those that left the program pre-maturely (avg. 50.36 vs. 48.44). Within the graduated cohort, Application Summary Scores are significantly different between men (avg. 2.36) and women (avg. 2.19) with $p = 0.045$, or a 4.5% chance for Type I error; LPI Modeling scores are significantly different between men (avg. 49.78) and women (avg. 51.85) with $p = 0.040$, or a 4% chance for Type I error; LPI Encouraging scores are significantly different between men (avg. 46.05) and women (avg. 49.71) with $p = 0.011$, or a 1.1% chance for Type I error. The WGCTA scores are just outside the 5% cut off for significant difference between men (avg. 31.99) and women (avg. 30.33) with $p = 0.059$ or a 5.9% chance for Type I error. Within the attrited cohort, Application Summary Scores were significantly different between men (avg. 2.49) and women (avg. 2.18) with $p = 0.004$, or a 0.4% chance for Type I error; WGCTA scores are significantly different between men (avg. 31.72) and women (avg. 28.87) with $p = 0.013$, or a 1.3% chance for Type I error.

Furthermore, results indicated that there are no significant differences existed between the men who attrited versus the men who graduated and also with the women samples with a $p < 0.05$ significance level. It is interesting to note that in comparing graduated cohort to attrited cohort (men to men and women to women who graduated versus who attrited) there were no significant differences in the variables. However, there were significant differences in comparing men and women in the same cohort (e.g., graduated or attrited). Firstly, within the graduate cohort (men had significantly higher application summary scores (avg. 2.36) versus women (avg. 2.19). However, within the attrited cohort men also had significantly higher application summary scores (avg. 2.49) versus women (avg. 2.18). Furthermore, application summary scores were actually significantly higher in the attrited group of men (on average) than in the graduate group providing impetus for re-evaluating the application summary score process in program admissions. Secondly, within the graduated cohort men had lower average LPI Modeling and Encouraging scores (e.g., avg. 49.78 and 46.05) as compared with women's scores (e.g., avg. 51.85 and 49.71). These scores are significant to the prediction of graduation for men and

women alike based, since there was no significant difference between men and women in the attrited cohort.

Predictive Relationship

All independent variables tested during the bivariate prediction analyses have been included in the logistic regression. Variables such as MBTI-Perceiving, MBTI-Feeling and MBTI-Intuitive were eliminated from the logistic regression model. The observed sensitivity of this model to correctly predict graduation based on all of the independent variables was 47.1%. The observed specificity and ability to correctly predict attrition based on all of the independent variables in the above equation was 79.4%. And the overall ability of this model to correctly predict the correct percentage of graduation vs. attrition is 65.5%.

As Table 1 shows, only one independent variable (LPI-Modeling the Way), emerged as significant contributor to persistence, showing a level of statistical significance of 0.042. Thus, the logistic regression analysis indicated that LPI-Modeling the Way is a significant predictor for graduation. The predictive statistic*s* indicate that the effective leadership behavior of *Modeling the Way* is in fact a significant predictor of persistence. Descriptive statistics showed as well that those that do persist through to degree completion on the doctoral level scored consistently higher (average 3.8%) in the effective leadership behavior of *Modeling the Way* than those that did not complete the program. Moreover, significant difference t-test analysis showed that differences in *Modeling the Way* scores between those that persist and those that do not are, indeed, significant. Thus, the effective leadership behavior of *Modeling the Way* is significant to the prediction of graduation. Individuals who model the way for others concerning the way people should be treated and the way goals should be pursued seem to also concentrate on their own behaviors and self-discipline.

Findings also showed that Master's GPA had no statistical significance on an individual's ability to persist. This result further implies that traditional academic measure of *master's level GPA* does not contribute meaningfully to the prediction of retention or attrition at the doctoral level. Thus, the findings of the current study are consistent with studies that found that while traditional indicators, that are frequently used for admissions decisions do not influence retention significantly, GPA could nonetheless be a moderating variable for retention. Moreover, *gender* did not qualify as significant predictor for student persistence. However, this study's descriptive statistics showed that more female than male students are amongst those that graduate (6.3%).

Two findings stood out regarding the *Application Summary* score. Firstly, results seem to suggest that those with higher application summary scores are more likely to drop out of the program and secondly, men had consistently higher application summary scores. Both of these findings should provide impetus for re-evaluating the application summary score process in program admissions.

While this research demonstrated that psychological type is not a significant predictor for the overall academic achievement at the graduate level it is nevertheless a contributing factor. Even though predictive statistics did not reveal psychological type to be a significant contributor to online leadership retention, descriptive data analysis identified ISTJ types with the highest retention and graduation rates. Modeling the Way emerged as the single most significant predictor of persistence and success in the online doctoral leadership program.

Table 1: *Logistic Regression Using All Independent Variables*						
Variable	*B*	*SE B*	Wald	*df*	Sig.	Exp(B)
SEX(0)FEM	.51	.46	1.25	1	.26	1.68
MGPA	-.26	.62	.178	1	.67	.77
APSS	.61	.84	.51	1	.48	1.83
WGCTA	-.02	.03	.34	1	.56	.98
LPI-CHALL	-.01	.04	.11	1	.75	.99
LPI-INSP	.01	.04	.02	1	.90	1.01
LPI-ENAB	.01	.06	.03	1	.86	1.01
LPI-MODL	-.10	.05	4.12	1	.04	.90
LPI-ENC	.04	.04	.99	1	.32	1.04
MBTI-E	-.35	.80	.19	1	.67	.71
MBTI-I	-.55	.84	.43	1	.51	.58
MBTI-S	-.69	.53	1.70	1	.19	.50
MBTI-T	-.41	.49	.67	1	.42	.67
MBTI-J	.56	.59	.89	1	.35	1.74
Constant	2.70	3.66	.55	1	.46	14.94

EXPLORING THE CONNECTION

As discussed above, self-efficacy has been studied in leadership, including research on organizational effectiveness, decision-making, and training for quite some time. Research has found that those with higher levels of self-efficacy seem to lead and make decisions in a way that increases productivity and performance (Bandura & Jourden, 1991; Wood, Bandura, & Bailey, 1990). A positive relationship was also found to exist between self-efficacy and effective leadership behavior (Endress, 2000; Posner & Rosenberger, 1997; Stage, 1996), as effective leaders possess certain sets of skills or characteristics that correlate positively with the self-efficacy construct. Individuals that use self-leadership and self-regulation concentrate on their behavior and are self-disciplined. These leaders rely on self-imposed strategies to manage behavior in doing difficult, unattractive, though necessary tasks.

Kouzes and Posner (1995) set out to discover what people did when they are at their personal best and found that effective leaders – as measured along five distinct leadership practices - show higher levels of self-regulation and thus are more prone to succeed and persist in their endeavors. Effective leaders demonstrate a high level of personal control and regulation over their abilities to fulfill the responsibilities of their position. Kusy, Essex, and Marr (1995)

confirmed that that effective leaders exhibited persistence when challenged by obstacles and concluded that persistence associated well with the behaviors measured by Kouzes and Posner's instrument.

The connection between exemplary leadership behavior as measured by the Leadership Practices Inventory (LPI) (Kouzes and Posner, 1995) and student persistence appeared somewhat intuitive at the beginning of this study. Nevertheless, in light of findings and the review of the literature around the concepts of self-regulation and self-efficacy, the connection between individuals' leadership behavior and their resilience to be perseverant in their goals and aspirations becomes clearer.

Research suggests that effective leaders demonstrate a high level of self-regulation over their abilities to fulfill the responsibilities of their position, to attain predetermined goals and to stay committed to a task, regardless of the circumstances or difficulties involved (Holst, 1990). Research has also shown that self-regulation, deeply intertwined with the concept of self-efficacy, positively influences distance education success (King, Harner, & Brown, 2000). Brown (2003), for instance, found that a particular positive relationship between self-regulation and the effective leadership behavior of *Modeling the Way*, as measured through Kouzes and Posner's (1995) Leadership Practices Inventory (LPI). Based on this research it was expected that students with higher scores in the various categories of effective leadership behavior would persist in the program through to degree completion. To determine and recognize the value of effective leadership behavior in regards to persistence in online education this study employed the five leadership practices based on Kouzes and Posner's research, as benchmarks for effective leadership. To this day there are no studies that examine the impact of effective leadership behaviors as measured by the Leadership Practices Inventory (Kouzes and Posner) on student's achievement or retention. For this study, the specific leadership behaviors to be measured were derived from a body of research related to organizations and leadership, detailed in the book entitled, *The Leadership Challenge: How To Get Extraordinary Things Done In Organizations.* Based on the reviewed literature, this study employed the self-typing paragraph approach and Kouzes and Posner's LPI to examine the following hypotheses: (a) retention is positively related to the participant's self-scored exemplary leadership practice of challenging the process, (b) retention is positively related to the participant's self-scored exemplary leadership practice of inspiring a shared vision, (c) retention is positively related to the participant's self-scored exemplary leadership practice of enabling others to act, (d) retention is positively related to the participant's self-scored exemplary leadership practice of modeling the way, and (e) retention is positively related to the participant's self-scored exemplary leadership practice of encouraging the heart. As Table 1 shows, one variable - *Modeling the Way* - emerged as significant predictor of persistence and graduation. The study's predictive statisti*c*s (Table 1) indicate that the effective leadership behavior of *Modeling the Way* is in fact a significant predictor of persistence. Descriptive statistics showed as well that those that do persist through to degree completion on the doctoral level scored consistently higher (average 3.8%) in the effective leadership behavior of

Modeling the Way than those that did not complete the program. Moreover, significant difference t-test analysis showed that differences in *Modeling the Way* scores between those that persist and those that do not are, indeed, significant.

Thus, the effective leadership behavior of *Modeling the Way* is significant to the prediction of graduation. Individuals who model the way for others concerning the way people should be treated and the way goals should be pursued seem to also concentrate on their own behaviors and self-discipline.

Modeling the Way consists of the two strategies of setting the example and achieving small wins. "Leaders establish principles concerning the way people (constituents, colleagues and customers, alike) should be treated and the way goals should be pursued. They create standards of excellence and then set an example for others to follow. Because the prospect of complex change can overwhelm people and stifle action, they set interim goals so people can achieve small wins as they work toward larger objectives. They unravel bureaucracy when it impedes action; they put up signposts when people are unsure of where to go or how to get there; and they create opportunity for victory" (Kouzes & Posner, 2001, p. 9). When exhibiting behaviors attributed to this scale, leaders stand up for their beliefs, are diligent and hard working.

DISCUSSION AND FUTURE CONSIDERATIONS

Extensive examination of pre-matriculation student characteristics can open the door to many new directions for student persistence research. Better understanding of the construct of persistence will evolve as additional studies are performed.

Based on the descriptive analysis performed in this study, the following profile for the typical persisting and graduating student is represented: Graduates of the online leadership development program are 6.3% more likely to be female, have higher WGCTA-Critical Thinking scores by an average of 4.2%, have higher LPI-Modeling the Way scores by an average of 3.8%, and exhibit a stronger preference for the MBTI profile of Introvert (I), Sensing (S), Thinking (T), and Judging (J).

The findings in particular emphasize the importance of behavioral characteristics in regard to persistence. LPI-Modeling the Way emerged as significant predictive value of retention and persistence in the online doctoral leadership studies program, a finding that - to this date - did not surface in any other research pertaining to retention or persistence. However, Cavins (2005), in a study examining the relationship between emotional-social intelligence and leadership practices among college students, also discovered the positive impact of *Modeling the Way* on student behavior, such as emotional-social intelligence and self-actualization. In her study *Modeling the Way* had the strongest correlation with overall emotional-social intelligence and self-actualization. Both constructs relate to one's ability to identify personal values and strive towards continual self-improvement of one's abilities and talents.

Overall, *Modeling the Way* has to do with an individual's ability to pursue projects through to completion. Kouzes and Posner (1995) explained that this leadership practice is about setting the example and displaying a high level of personal integrity and optimism. The findings of this study also strengthen Goleman, et al.'s (2002) assertion that an individual "who is optimistic can roll with punches, seeing opportunity rather than a threat in a setback" (p. 255). Closely related to the concept of optimism is the notion of hope, to which Grasgreen (2012) had this to say:

> "It doesn't seem surprising that someone who can set goals, visualize paths to achieve them, and summon the motivation to start down those paths would be more likely to succeed than someone who can't do those things. But measuring the potential effect of those characteristics – which together compose the characteristic of "hope" – is starting to become more clear. A growing (but still small) body of research is finding that students with high levels of hope get better grades and graduate at higher rates than those with lower levels, and that the presence of hope in a student is a better predictor of grades and class ranking than standardized test scores. In one study at a Midwestern state university, hopeful students graduated at rates 16 percent higher than non-hopeful students. Another, at Indiana University-Purdue University Indianapolis, found that the presence of hope in first-semester law students there better predicted academic success than did ACT or LSAT scores. One study found that high-hope people experience less anxiety in general and in specific relation to test-taking situations. A longitudinal study of more than 100 students at two British universities found that hope was a better predictor of academic success than intelligence, personality or previous scholarly achievement."

Without a doubt, more research needs to be conducted to study in more detail the connection between effective leadership behaviors, as measured through the Leadership Practices Inventory, and retention and persistence in online leadership education. Is the LPI-*Modeling the Way* a significant predictor of success only in leadership development programs or does it also affect persistence and retention in other programs? Would more individuals graduate, if programs could be implemented to strengthen the effective leadership behavior of *Modeling the Way*? Would there be a significant difference between educational environments in regard to LPI-Modeling the Way?

Since effective leadership behavior, such as that found in *Modeling the Way*, has been linked to constructs such as self-efficacy and self-regulation, all of which have been linked to student success and persistence in higher education and the online environment, more research needs to be conducted pertaining to effective leadership behaviors and constructs such as self-

efficacy, self-regulation and self-leadership, in order to better understand their impact on persistence and retention in online leadership development.

In light of the findings of this study, which point more toward the importance of behavioral strategies as contributors to persistence, future research should examine in more detail the relationship between persistence and theories such as *Social Learning Theory, Social Cognitive Theory,* and/or *Intrinsic Motivation Theory.*

Future research must also recognize the need to apply research based on these study's findings to a variety of institutional environments. Findings must be compared and contrasted to facilitate a broader understanding of what drives individuals to choose specific types of institutions and to further understanding about how background characteristics of those individuals impact persistence. This research, for instance, focused on students enrolled in an online doctoral leadership degree program at a privately-owned Christian institution. How would the results of this research compare to similar research over an entire system of online leadership degree programs at the doctoral level? Would there be dramatic differences from one institution to another or between those that are faith based and those that are not? How would the results of this research compare to similar research conducted at a state-owned public institution? How would it compare to research conducted at the master's or bachelor's degree level? What about non-degree programs and training programs? Would there be significant differences between educational environments, such as online or traditional face-to-face modus operandi?

REFERENCES

Alexander, P. A. (1995). Superimposing a situation-specific and domain-specific perspective on an account of self-regulated learning. American Psychologist, 30(4), 189-193.

Anderson, J. S., & Prussia, G. E. (1997). The self-leadership questionnaire: Preliminary assessment of construct validity. The Journal of Leadership Studies, 4(2), 119-143.

Ash, M.L. (2004). A decision support system to predict student retention in higher education: A multinomial choice logit model. Dissertation Abstracts International, 65(03), p. 844. (UMI no. 3126308).

Astin, A. W. (1984). Student Involvement: A developmental theory for higher education. Journal of College Student Personnel, 25, 297-308.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

Bandura, A. (1982). Self-efficacy mechanisms in human agency. American Psychologist, 37, 122-147.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-reactive mechanisms. In R. Dienstbier (Ed.), Nebraska Symposium on Motivation 1990 (pp. 69-164). Nebraska: University of Nebraska Press.

Bandura, A. (1992). Exercise of personal agency through the self-efficacy mechanism. In R. Schwarzer (Ed.), Self-efficacy: Thought control of action (pp.3-38). Washington, D.C.: Hemisphere Publishing.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. Educational Psychologist, 28(2), 117-148.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp 71-81). New York, NY: Academic Press

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W.H. Freeman & Company.

Bandura, A. (2000). A sociocognitive perspective on intellectual development and functioning. Newsletter for Educational Psychologists, 23(2), 1-4.

Bandura, A., & Jourden, F.J. (1991). Self-regulation mechanism governing the impact of social comparison on complex decision-making. Journal of Personality and Social Psychology, 60, 805-814.

Bass, B. (1990). Bass and Stogdill's handbook of leadership: Theory, research, and managerial applications. (3rd. ed.). New York: The Free Press.

Bean, J. P. (1985). Interaction effects based on class level in an exploratory model of college student dropout syndrome. American Educational Research Journal, 22, 35-64.

Bean, J. P., & Eaton, S.B. (2001). The psychology underlying successful retention practices. Journal of College Student Retention, 3(1), 73-89.

Bielaczyc, K., Pirolli, P. L., & Brown, A. L. (1995). Training in self-explanation and self-regulation strategies: Investigating the effects of knowledge acquisition activities on problem solving. Cognition and Instruction, 13(2), 221-252.

Brown, R.T. (2003). Self-leadership and effective leadership behaviors, as observed by subordinates. Dissertation Abstracts International, 64(04), p. 1327. (UMI no. 3087145).

Cavins, B. J. (2005). The relationship between emotional-social intelligence and leadership practices among college student leaders. Ed.D. Bowling Green State University, United States -- Ohio.

Doherty, P. B. (1998). Learner control in asynchronous learning environments. Asynchronous Learning Networks Magazine, 2(2).

Endress, W. L. (2000). An exploratory study of college student self-efficacy for relational leadership: The influence of leadership education, co-curricular involvement, and on-campus employment. Dissertation Abstracts International, 61(04), p. 1235. (UMI No. 9967894).

Feltz, D. L. (1988). Self-confidence and sports performance. In K.B. Pandolf (Ed.), Exercise and Sport Science Reviews (Vol 16., pp. 423-457). New York, NY: Macmillan.

Gist, M.E., & Mitchell, T.R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. Academy of Management Review, 17, 183-211.

Goleman, D., Boyatzis, R.E. and McKee, A. (2002), Primal Leadership: Realizing the Power of Emotional Intelligence, Harvard Business School Press, Boston, MA.

Grasgreen, A. (2012). Here's Hoping. Inside Higher Ed. Retrieved July 6, 2012 from: http://www.insidehighered.com/news/2012/07/06/researchers-apply-hope-theory-boost-college-student-success

House, R. J., & Aditya, Ram N. (1997) The social scientific study of leadership: Quo Vadis? Journal of Management, 23(3), 409-473.

Jackson, T., MacKenzie, J., & Hobfoll, S. E. (2000). Communal aspects of self-regulation. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 171-207). New York, NY: Academic Press.

Jegede, O., Taplin, M., Fan, R. Y. K., Chan, M. S. C, & Yum, J. (1999). Differences between low and high achieving distance learners in locus of control and metacognition. Distance Education, 20(2), 255-273.

Johnson, A. (1997). Assessment, outcomes measurement and attrition: Reflections, Definitions, and delineations. Colleges and Universities, 73(2), 14-17.

Jonassen, D. H. (2000). Computer as Mindtools for schools: Engaging in critical thinking. Upper Saddle River, NJ: Merrill.

Joo, Y., Bong, M., & Choi, H. (2000). Self-efficacy for self-regulated learning, academic self-efficacy, and internet self-efficacy in web-based instruction. Educational Technology Research and Development, 48(2), 5-17.

Kazan, A.L.K. (1999). Exploring the concept of self-leadership: Factors impacting self-leadership of Ohio Americorps members. Dissertation Abstracts International, 60(11), p. 3870. (UMI No. 9951675).

Kearsley, G. (2000). Online education: Learning and teaching in cyberspace. Toronto, Canada: Wadsworth.

King, F.B., Harner, M., & Brown, S.W. (2000). Self-regulatory behavior influences in distance learning. International Journal of Instructional Media, 27(2), 147-156.

Kinzie, M. B. (1990). Requirements and benefits of effective interactive instruction: Learner control, self-regulation, and continuing motivation. Educational Technology Research and Development, 38(1), 1-21.

Kouzes, J. M., & Posner, B. Z. (1995). The leadership challenge. How to keep getting extraordinary things done in organizations. (2nd ed.). San Francisco, CA: Jossey-Bass.

Kur, M. (1997). Leaders everywhere! Can abroad spectrum of leadership behaviors permeate an entire organization? Leadership and Organizational Development Journal, 18(4), 267-271

Kusy, M., Essex, L. N., & Marr, T. J. (1995). No longer a solo practice: how physician leaders lead (using the leadership practices inventory). Physician Executive, 21, 11-16.

LeFrancios, G. R. (1995). Theories of human learning. Pacific Cove, CA: Brooks/Cole Publishing Company.

Locke, E.A., Frederick, E., Lee, C., & Bobko, P. (1984). Effect of self-efficacy. Goals and task strategies on task performance. Journal of Applied Psychology, 69(2), 241-251.

Loo, R., & Thorpe, K. (1999). A psychometric investigation of scores on the Watson-Glaser Critical Thinking Appraisal new Form S. Educational and Psychological Measurement, 59(6), 995-1003.

Lorenzetti, J. P. (2002). Before they drift away: Two experts pool retention insights. Distance Education Report, 6(8), 1-2.

Lorenzo, G. (2002). Experiencing rapid enrollment increases: Three successful online distance education programs talk about scaling up. Educational Pathways. Retrieved May 2, 2005, from http://www.edpath.com/enrollup.htm

Lorr, M. (1991). An empirical evaluation of the MBTI typology. Personality and Individual Differences, 12, 1141-1145.

Lynch, A (1987). Type development and student development. In Provost, J. & Anchors, S., (Eds.), Applications of the Mvers-Briggs Type Indicator in Higher Education (pp. 5-29). Palo Alto, CA: Consulting Psychologists Press.

Lynham, S. A. (2000). Leadership development: A review of the theory and literature. In P. Kuchinke (Ed.), Proceedings of the 2000 Academy of Human Resource Development annual meeting. Baton Rouge, LA: Academy of Human Resource Development.

Mansour, A. I. (1994). The development of a multinominal logit choice model to improve admissions and retention rates of students in institutions of higher education. Dissertation Abstracts International, 55 (07), p. 1844. (UMI No. 9431673).

Manz, C. C. (1986). Self-leadership: Toward an expanded theory of self-influence processes in organizations. Academy of Management Review, 11, 585-600.

Manz, C. C. (1990). The art of self-leadership. Executive Excellence, 7(8), 7-8.

Manz, C. C., & Sims, H.P. (1991). Superleadership: Beyond the myth of heroic leadership. Organizational Dynamics, 19(4), 18-35.

Matthews, G., Schwean, V. L., Campbell S. E., Saklofske, D. H., & Mohamed, A. A. R. (2000). Personality, self-regulation, and adaptation: A cognitive-social framework. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 171-207). New York, NY: Academic Press.

McCormick, M. J. (2001). Self-efficacy and leadership effectiveness: Applying social cognitive theory to leadership. The Journal of Leadership Studies, 8, 2233.

Mead, G. H. (1982). The individual and the social self (D. L. Miller, Ed.). Chicago: University of Chicago Press.

Murtaugh, P., Burns, L.D., & Schuster, J. (1999). Predicting the retention of university students. Research in Higher Education, 40(3), 355-77.

Myers, I.B., & McCaulley, M. (1985). *A guide to the development and use of the Myers-Briggs type Indicator.* (2nd ed.) Palo Alto, CA: Consulting Psychologist Press.

Nauta, M., & Kahn, J. (2000). The social-cognitive model applied to academic performance and persistence. Paper presented at the Annual Conference of the American Psychological Association, 108th, Washington, DC, August 4 -8, 2000. (ERIC Document Reproduction No. ED 448 380).

Northouse, P. G. (2001). Leadership: Theory and practice (2nd ed.). Thousand Oaks, CA: Sage.

Oblinger, D. G., & Verville, A. (1998). What business wants from higher education. Phoenix, AZ: American Council on Education/Oryx Press.

Pajares, F. (1996). Self-efficacy beliefs in achievement settings. Review of Educational Research, 66, 543-578.

Palincsar, A. S., & Brown, A. L. (1989). Instruction for self-regulated reading. In L. B. Resnick & L. E. Klopfer (Eds.), Toward the thinking curriculum: Current cognitive research (pp. 19-39). Alexandria, VA: Association for Supervision and Curriculum Development.

Palloff, R. M., & Pratt. K. (1999). Building learning communities in cyberspace. San Francisco, CA: Jossey-Bass.

Paris, S. B., & Newman, R. S. (1990). Developmental aspects of self-regulated learning. Educational Psychologist, 25, 87-102.

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 451-502). New York, NY: Academic Press.

Posner, B., & Rosenberger, J. (1997). Effective orientation advisors are also leaders. NASPA Journal, 35(1), 46-56.

Schunk, D. H. & Zimmerman, B. J. (1998). Conclusions and future directions for academic interventions. In D. H. Schunk & B. J. Zimmerman (Eds.), Self-regulated learning: from teaching to self-reflective practice (pp. 225-235). New York, NY: The Guilford Press.

Schunk, D. H. (1989). Social cognitive theory and self-regulated learning. In B. J. Zimmerman & D, H, Schunk (Eds.), Self-regulated learning and academic achievement: theory, research, and practice (pp. 83-110). New York, NY: Springer-Verlag.

Schunk, D. H. (1995). Inherent details of self-regulated learning include student perceptions. Educational Psychologist, 30, 213-216.

Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: self-efficacy enhancing interventions. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 631-650). San Diego, CA: Academic Press.

Schunk, D. H., & Zimmerman, B. J. (1997). Social origins of self-regulatory competence. Educational Psychologist, 72, 195-208.

Seidman, A. (1995). The community college: A challenge for change. Community College Journal of Research and Practice, 19(3), 247-254.

Shapiro, S. L., & Schwartz, G. E. (2000). The role of intention in self-regulation: Toward intentional systemic mindfulness. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 253-273). New York, NY: Academic Press.

Stage, F.K. (1996). Setting the context: Psychological theories of learning. Journal of College Student Development, 37, 227-235.

Staples, D. S., Hulland, J. S., & Higgins, C. A. (1998). A self-efficacy theory explanation for the management of remote workers in virtual organizations. Journal of Computer Mediated Communication, 5(4).

Tinto, V. (1987, 1993). Leaving College: Rethinking the Causes and Cures of Student Attrition. Chicago, IL: University of Chicago Press.

Vancouver, J. B. (2000). Self-regulation in organization settings: A tale of two paradigms. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 303-341). New York, NY: Academic Press.

Woehlke, P. L. (1985). Watson-Glaser Critical Thinking Appraisal. In D. J. Keyser & Wood, R. E., Bandura, A., & Bailey, T. (1990). Mechanisms governing organizational performance in decision-making environments. Organizational Behavior and Human Decision Processes, 46, 181-201.

Yukl G.A., & Van Fleet, D.D. (1992). Cross-situational research on military leader effectiveness. Organizational Behavior and Human Performance, 30, 87-108.

Zhang, J., Li, F., Duan, C., & Wu, G. (2001). Research on self-efficacy of distance learning and its influence to learners' attainments. Retrieved October 1, 2004, from http://www.icce2001.org/cd/pdf/p13/CN100.pdf

Zimmerman, B. J. (1986). Development of self-regulated learning: Which are the key sub processes? Contemporary Educational Psychology, 16, 307-313.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. Journal of Educational Psychology, 81(3), 329-339.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. Educational Psychologist, 25, 3-17.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 13-39). New York, NY: Academic Press.

Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. American Educational Research Journal, 31(4), 845-862.

Zimmerman, B. J., & Risemberg, R. (1997). Self-regulatory dimension of academic learning and motivation. In G. D. Phye (Ed.), Handbook of academic learning: Construction of knowledge (pp. 105-125). San Diego, CA: Academic Press.

Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs in personal goal setting. American Educational Research Journal, 23(4), 614-628.

Zimmerman, B. J., Bonner, S., & Kovach, R. (1996). Developing self-regulated learners: Beyond achievement to self-efficacy. Washington, DC: American Psychological Association.

GENDER AND COMPARATIVE EVALUATIONS IN STUDENT GROUPS

Janice L. Ammons, Quinnipiac University
Charles M. Brooks, Quinnipiac University

ABSTRACT

It is well documented that students generally overestimate their grades in coursework, and some studies have found that male students overestimate their test scores more than females do. This study examines gender differences when self-evaluations are compared to peer-evaluations within student groups. Differences are found between male students and female students in their ability to accurately judge their own contributions in group work relative to the evaluations they receive from their peers.

INTRODUCTION

The assessment of student performance is a critical component of the education process. With the increased use of group projects as an integral component of higher education, there has been increased interest in both self- and peer-evaluations of student performance. In the absence of the ability to assess the quality their personal contributions, students are unable to adequately monitor their own work behaviors and may fail to obtain their individual learning objectives.

The results of previous research document a tendency for students to be generous in *self-*ratings and in projecting their test scores. Self-assessment scores of group presentations are nearly 4.5% higher than the peer assessment scores (Sherrard, Raafat, and Weaver, 1994). Likewise, students tend to overestimate their grades through the semester (Burns, 2007). Chevalier (2009) and Beyer (1999) have established that students tend to overestimate their expected grades on tests with male students overestimating their scores more than their female counterparts.

Gender bias in *peer* evaluations of team members has been examined in previous studies of group work. Ammons and Brooks (2011) and Falchikov and Magin (1997) found that the average ratings received by students from group members who were of the opposite gender were not statistically different than ratings received by students from group members who were of the same gender. In short, these studies did not find evidence of gender bias in student peer evaluations. However, neither of these studies tested for gender differences in the extent of overestimation of self-evaluations in group work.

This study examines gender differences in self-evaluations as compared to peer evaluations of an individual's performance of group work. Specifically, the existence of gender

differences in comparative evaluations (e.g., self versus peer assessments) of contributions to group work is investigated. Also, gender differences in the extent to which students overstate their contributions to their groups is examined.

METHOD

The participants were 120 women and 210 men who were enrolled in a freshman course required of all business majors. This course, which is intended to introduce the cross-functional disciplines of business, used Mike's Bikes as a business simulation game so that students would experience how the implementation of strategy involves the interaction of these disciplines. Each of the 12 sections of the course consisted of student groups with 4 to 7 students in each group. The course consisted of three modules: accounting, marketing, and management. Each module consisted of a major group project. At the end of each module, each student completed a self-evaluation and an evaluation of each group member.

The data for this study came from the third and last set of self- and peer-evaluations completed by students (with an equal distribution across accounting, marketing, and management modules as that third round). If the accuracy of self-perceptions increases with experience and feedback (Radhakrishnan, Arrow, and Sniezek, 1996; Shepperd, Ouellette, and Fernandez, 1996), then by using data only from the third round of the administration of these self- and peer-evaluations, we reduce the likelihood of finding a statistical difference.

Three hundred thirty students completed this final set of evaluations resulting in 330 self assessments and 1592 peer assessments (for a total of 1602 evaluations). Of the 330 respondents, 120 were female and 210 were male.

PROCEDURE

The group projects combined to account for 31.25% of the course grade. In the accounting module, each group created a balanced scorecard strategy map for its firm in the simulation and analyzed the firm's performance in an oral presentation to the class. In the marketing module, each group designed a marketing plan for its simulation firm and presented that plan to the class. In the management module, each group designed a strategic plan and presented it to the class.

At the end of each module (at three different points during the term), students completed a peer evaluation packet. The packet consisted of a cover sheet (Exhibit 1) that offered instructions on how to complete the packet and explained that the evaluations would be anonymously shared with their group members. A student would complete the table at the bottom of that cover page to indicate the overall performance rating that the student gives for each of his/her group members. The second page of the peer evaluation packet illustrated a sample completed feedback grid (Exhibit 2). Subsequent pages in the packet contained blank

feedback grids (similar to Exhibit 2) so that the rater could complete one for each member of the team including himself/herself. These sheets were intended to offer more detailed feedback to each member of the group by using open feedback and a rating scale of 1 (never) to 5 (always) across six areas of performance (prompt attendance at group meetings, delivery of agreed upon parts of project in a complete fashion, meeting deadlines, volunteering appropriately, pulling fair share of workload, and displaying an enthusiastic and positive attitude).

Each student completed his/her evaluation packet outside of classroom hours. Each student placed his/her evaluation packet in a sealed envelope, wrote his/her name, the course section, and the name of the team on the outside of the envelope, and gave that envelope to the module instructor after the completion of the group project and presentation. The average of the overall scores received by a student was used as a weight to determine the individual's grade on the group work. If a group earned a 90 on its project and a particular student in that group received an average evaluation from peers and self of 90 points, then that individual received an 81 as a grade on the project. In some cases, students received grades in excess of 100 points.

Analysis

The overall performance ratings given by students when rating themselves (self assessments) ranged from 90 to 150. If a student wished to indicate that each person on the team contributed equally to the performance of the team, then a student would mark a 100 for each team member. Thus, a 90 indicates that the individual recognized that he/she contributed less than his/her "fair share" to the team's performance and a 150 indicates that the individual contributed far beyond others in the group. The mean self assessment score was 103.52. Since this is greater than 100, it indicates that individuals tended to think that they contributed a bit more than an equal share to the team. Table 1 shows that the mean rating that female students (103.80) gave themselves on overall performance is not significantly different from the mean rating that male students (103.37) gave themselves (t=0.480, p=.632).

Table 1: Comparison of Self-assessment of Overall Evaluation Ratings by Gender						
Evaluation Criteria	Gender	n	Mean	Std. Deviation	t	*p*-value
Overall Evaluation	Female	120	103.80	7.765	0.480	.632
	Male	210	103.37	7.968		
	Male	189	4.88	0.359		

The overall mean rating of 103.80 that female students gave in their self-evaluations is statistically different (t=4.582, p=0.000) from the mean rating of 100.44 received by those female students from their peer group members, as shown in the first row of Table 2. The mean rating of 103.37 that male students gave in their self-evaluations is statistically different (t=5.853, p=0.000) from the mean rating of 98.83 received by those male students from their peer group members, as shown in the first row of Table 3. Both female and male students overestimate their overall contribution to their groups.

The evaluation forms also prompted raters to consider a list of individual work behaviors. Raters marked each of these criteria between 1 (never) and 5 (always) and some provided open-ended feedback on each dimension. Although scores on these individual performance criteria did not enter into the grading process, raters may have considered these marks in determining the overall performance ratings given to their team members. While self-assessment scores on these dimensions do not differ between male and female students, there are significant differences between self-assessment ratings and individuals' ratings by their peers for both females (t=2.291, p=0.022, Table 2) and males (t=3.536, p=0.000, Table 3) in terms of the propensity to volunteer. Both females and males rated their own likelihood to volunteer higher than did their group members.

Table 3 also indicates that males overestimated their contributions along the dimensions of promptly attending meetings (t=2.565, p=0.010), delivering work in complete fashion (t=3.383, p=0.001), meeting deadlines (t=2.316, p=0.021), pulling fair share (t=3.988, p=0.000), and demonstrating a positive and enthusiastic attitude (t=2.494, p=0.013). However, females' self-assessments of their contributions along these same five dimensions are not significantly different from their group members' assessments of those females (Table 2).

Table 2: Comparison of Self- and Peer-assessment Ratings for Females						
Evaluation Criteria	Self- or Peer-evaluation	N	Mean	Std. Deviation	t	*p*-value
Overall Evaluation	Self-evaluation	120	103.80	7.765	4.582	.000
	Peer-evaluation	568	100.44	7.201		
Prompt in attendance at team meetings	Self-evaluation	105	4.86	0.352	1.293	.196
	Peer-evaluation	564	4.78	0.562		
Delivered agreed upon parts of project in a complete fashion	Self-evaluation	105	4.94	0.233	1.588	.113
	Peer-evaluation	564	4.88	0.420		
Met deadlines	Self-evaluation	105	4.97	0.167	1.438	.151
	Peer-evaluation	563	4.92	0.384		
Volunteered appropriately during team meetings when tasks need to be accomplished	Self-evaluation	105	4.91	0.281	2.291	.022
	Peer-evaluation	564	4.79	0.539		
Pulled fair share with regard to overall workload	Self-evaluation	105	4.91	0.281	1.671	.095
	Peer-evaluation	563	4.83	0.506		
Showed enthusiastic and positive attitude about team activities and fellow team members	Self-evaluation	105	4.87	0.369	0.665	.506
	Peer-evaluation	563	4.83	0.522		

Table 3: Comparison of Self- and Peer-assessment Ratings for Males						
Evaluation Criteria	Self- or Peer-evaluation	N	Mean	Std. Deviation	t	*p*-value
Overall Evaluation	Self-evaluation	210	103.37	7.968	5.853	.000
	Peer-evaluation	1024	98.83	10.631		
Prompt in attendance at team meetings	Self-evaluation	191	4.82	0.439	2.565	.010
	Peer-evaluation	1006	4.67	0.784		
Delivered agreed upon parts of project in a complete fashion	Self-evaluation	191	4.95	0.212	3.383	.001
	Peer-evaluation	1006	4.80	0.604		
Met deadlines	Self-evaluation	191	4.95	0.246	2.316	.021
	Peer-evaluation	1007	4.86	0.518		
Volunteered appropriately during team meetings when tasks need to be accomplished	Self-evaluation	190	4.91	0.294	3.536	.000
	Peer-evaluation	1006	4.73	0.680		
Pulled fair share with regard to overall workload	Self-evaluation	189	4.93	0.274	3.988	.000
	Peer-evaluation	1007	4.72	0.704		
Showed enthusiastic and positive attitude about team activities and fellow team members	Self-evaluation	189	4.88	0.359	2.494	.013
	Peer-evaluation	1003	4.76	0.646		

DISCUSSION

Gender differences are apparent in our analysis. While both males and females overestimate their overall contributions to their groups, females are more accurate in evaluating their contributions along individual work behaviors. While females do overestimate their propensity to volunteer for tasks, they do not tend to overestimate their contributions along the other five work behaviors that were examined. Further, males overestimate their contribution on all dimensions of performance that were examined.

These results are from the third set of evaluations completed within the same groups decreasing the likelihood of finding a significant difference between one's self-evaluation and that individual's peer evaluation. This strengthens the conclusion that male students are not accurate in evaluating their own contributions to group projects, both overall and along the lines of individual work behaviors. However, since the results of the early evaluations were not compared to the final evaluation, it is unclear if students' accuracy in assessing their contributions improves over time. For instance, did the female students' accuracy in evaluating their own contributions along individual work behaviors develop over the course of the three administrations of the evaluation instrument or were the female students more accurate in their self-assessments from the beginning? Such considerations could be addressed in future studies.

REFERENCES

Ammons, J. L. and C. M. Brooks. (2011). An empirical study of gender issues in assessments using peer and self evaluations. *Academy of Educational Leadership Journal,* 15(49-62).

Burns, D. J. (2007). An examination of the accuracy of students' expected grade. *Academy of Educational Leadership Journal*, 11(3): 45-58.

Chevalier, A. (2009). Students' academic self-perception. *Economics of Education Review*, 28(6): 716-727.

Falchikov, N. and D. Magin. (1997). Detecting gender bias in peer marking of students' group process work. *Assessment and Evaluation in Higher Education, 22*(4): 385-397.

Radhakrishnan, P., H. Arrow, and J. Sniezek. (1996). Hoping, performing, learning, and predicting: Changes in the accuracy of self-evaluations of performance. *Human Performance*, 9(1): 23-49.

Shepperd, J., J. Ouellette, and J. Fernandez. (1996). Abandoning unrealistic optimism: Performance estimates and the temporal proximity of self-relevant feedback. *Journal of Personality and Social Psychology*, 70(4): 844-855.

Sherrard, W. R., F. Raafat, and R. R. Weaver. (1994). An empirical study of peer bias in evaluations: Students rating students. *Journal of Education for Business, 70*(1): 43-47.

EXHIBITS

Exhibit 1: Cover sheet for team member evaluation packet

_____

Name:
Group Name:
Section:
Date:

At three different times during the semester (near the end of each module), you will evaluate each of the members of your team. Fill in an evaluation sheet for each of your team members. All responses should be typed and then printed out.

Your evaluation and the evaluations from other members of your group will be returned to the person that is being evaluated. In order for these evaluations to be meaningful, you need to provide your team members with constructive feedback. Let your team members know what they are doing well and what they are not doing well. Also, let them know how they can improve their performance. When the forms are returned to your team members, they will not see your name associated with your comments on their performance.

Place your completed Team Member Evaluation Packet in a sealed envelope with your name, your group name, and your SB 101 section letter indicated on the outside of the envelope. The envelope should be turned in on the last day of the module.

The points that you award each team member will be used in determining that team members grade on that module's group project. Team members that do not do their fair share of the work may lose points on group work, and team members that do more than their fair share of the work may get extra points added to their group work.

On the overall evaluation, you will be "paying" each of your team members with points. You have will have 100 points for each member of your team. For example, if you have 6 members on your team, you have 600 points to allocate. If everyone contributed equally and did his/her fair share of the work, then each member of the team should receive 100 points. If someone did more than his/her fair share of the work, that person should receive more than 100 points. Likewise if someone did less than his/her fair share of the work, that person should receive less than 100 points.

After you have completed the individual evaluation forms (including a page for yourself), complete the Summary Table below. Type in your name and your team members' names. Indicate how many points each member of your team should receive. The points in this summary table should match the "pay" you indicated at the bottom of each person's individual page.

Add up the points that you have allocated across the columns of the summary table and put this number in the last column. This number should equal 500 points if you have 5 team members or 600 points if you have 6 team members.

Summary Table (Complete this Table)

Group Members Names	(Insert your name here)	(Insert group member's name here)	(Insert group member's name here)	(Insert group member's name here)	(Insert group member's name here)	(Insert group member's name here)	TOTAL TEAM POINTS
Allotment of Team Points							

Summary Table (Leave this Table Blank)

Your Group Evaluation Average	

If you do not feel that your group evaluation average accurately reflects the work that you completed on your group project, you should set up a meeting and talk with your team members. After talking with your team members, if you still do not feel that you have been evaluated fairly, you and your team should schedule a meeting with that module's professor.

Exhibit 2: Sample sheet in team member evaluation packet

Team Member's Name: Sample Team Member		
Evaluation Criteria:	For each criteria, rate this team member on a scale of 1 (Never) to 5 (Always)	Provide comments and constructive feedback in the spaces provided below:
Prompt in attendance at team meetings.	5	
Delivered agreed-upon parts of project in a complete fashion	5	
Met deadlines.	3	Sample team member was late completing the PowerPoint presentation. He was supposed to complete it on Wednesday afternoon, but he didn't finish until late Thursday night.
Volunteered appropriately during team meetings when tasks needed to be accomplished.	4	Sample Team Member was always at the meeting, but he was not always prepared for the meetings and hardly ever had anything to contribute. Sometimes, he just sat there.
Pulled fair share with regard to overall workload.	5	
Showed enthusiastic and positive attitude about team activities and fellow team members.	5	Sample Team Member was always enthusiastic about how our company was doing financially.
Overall Evaluation		
Based on the points available for the team, I would "pay" this person 85 for his/her share of the team points.	Overall Feedback (this is mandatory): Sample Team Member was really motivated at first, but at the end of the module, he let the team down when he was late with the PowerPoint. When he missed his deadline, it meant that the entire team had to stay up all night rehearsing our presentation. Once Sample Team Member knew he was having trouble with his part of the assignment, he should have asked for help.	

DESIGNING SERVICE LEARNING PROJECT IN SYSTEMS ANALYSIS AND DESIGN COURSE

Keh-Wen "Carin" Chuang, Purdue University North Central
Kuan-Chou Chen, Purdue University Calumet

ABSTRACT

Service learning is to promote real-world relevance through the application of classroom knowledge to problems in the business community. Study shows that service learning is a valuable instructional methodology and has been applied to many disciplines and areas. However, little is applied in Information System education. The purpose of the paper is to present the design of a service learning project to an undergraduate systems analysis and design course in a Computer & Information Technology program. The service learning project partners the enrolled students with a local Chamber of Commerce to develop a new information system housed on Microsoft Access database. The course design, student service learning activities, student reflection and assessment are presented in details. The impacts of the service learning education to the students, educator, department and university, local community, and the field of service learning are discussed as well in the paper.

Keywords: *Service Learning, Information Systems, Systems Analysis and Design, Course Design*

INTRODUCTION

Systems analysis and design is a complex and challenging methodology that a team of business and systems professionals uses to develop and maintain computer-based information system for an organization. In the early years of computing, analysis and design was considered as an art. Now that the need for information systems has become so great, nearly all organizations rely on system analysts to conduct business and system designs and operate information systems efficiently. According to the Hoosier Hot 50 Jobs published by the Indiana Department of Workforce Development (DWD, Hot Jobs Now, 2012), computer systems analyst is ranked No.16 on the Hot 50 jobs list with $66,867 average salary and a bachelor degree requirement. The employment of computer systems analysts is expected to grow by 20 percent from 2008 to 2018, which is much faster than the average for all occupations. The demand for systems analysts will also increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows.

Today, people in industry and academia have developed work methods that make systems analysis and design a disciplined process. Students major in the Computer and

Information Technology program need to learn not only the concepts and techniques in system analysis and design, but also need to gain the real world experience before joining the workforce. Besides, there is a concern in the perception and application gap between the skills learned in educational settings and what are practically applied in real-world settings. In such a fast-changing workforce environment, it is important that educators link the classroom learning to the practice in real world settings where the classroom models can be tested; and the problem solving and critical thinking skills can be practiced.

Service learning is one of the best approaches for educators to connect classroom knowledge to real world experience. Study shows that service learning has been identified as an extremely valuable educational tool and applied to different disciplines and areas such as computer science and engineering (Linos, Herman, & Lally, 2003), nursing education (Sadla, Doheny, Panthofer, & Anaya, 2003), accounting information systems (Rose, Rose, & Norman, 2005), web design course (Lazar, 2001). However, little is applied in information system education (Johnson & Johnson, 2005). This paper presents the design of a service learning project to an undergraduate systems analysis and design course. Through service learning project, students are enabled to develop systems analysis and design skills while enhancing their real world project experience and civic engagement. The course design, student service learning activities, student reflection and assessment are discussed in next sections. The impact of the service learning education to the students, educator, community, Department and University are explored in the discussions and conclusions.

COURSE DESIGN

The Systems Analysis and Design Methods course is a second-year course in the B.S. Computer & Information Technology program. This course is a comprehensive introduction class to help students develop the knowledge and skills needed to analyze and design information systems. A service learning proposal was submitted and awarded in the previous semester. The course design and budget plan were layout in the proposal. The three course design phases for the service learning component course include: identify client and project, organize student project teams, and design student service learning activities.

Identify client and project

The proposal principle investigator (PI) who is also the course instructor has contacted the University career planning office to obtain the potential clients information. Those possible clients were contacted with an introduction describing the objectives of the course, an overview of the students' skills and abilities, the purpose of the service learning project, and request if any interest or needs. After contacting the potential clients and from their indication of interest, more details of the potential projects were attained. The instructor assessed the scale, scope and the

expected timeline to select the client and project and achieved the mutual agreement for the project requirements, obtained the letter of support to establish the partnership for the service learning project. The course instructor also further clarified and discussed the project scope, objectives, key contact information, project timeline, and means of feedback between students and client.

Organize Student Project Teams

The students act as system analyst role and follow through the five phases of system development life cycle (SDLC), planning, analysis, design, implementation and maintenance to work on the project. At the first week of the semester, students were introduced for the service learning project as their semester-long team project. The purposes and objectives of the service learning project were explained to students as well. Students need to submit their individual resume to outline their skills and interested work areas. Then, the instructor divides the class into 3 to 4 students in each team based on their skill background and interests to balance each team's diversity. Each team will follow through the SDLC process to build the information system for the service learning project.

Design Student Service Learning Activities

The service learning project for the systems analysis and design course is to partner the enrolled students with the selected client, a local Chamber of Commerce office to develop a new information system housed on Microsoft Access database. The new information system will function as the main database and reporting tool to manage chamber membership information.

The previous study shows several different service learning design models that can be used for a class (Lazar & Lidtke, 1999; Lazar & Lidtke, 2002; Wei, Siow, & Burley, 2007). In this course, the service learning project is designed as a semester-long team project. The students are introduced to the service learning project at the first week of the semester. Students come to the classes each week to learn the system analysis and design fundamentals including various methodologies, techniques and tools that have been used to assist system analysts during systems analysis and design process. Examples and exercises are practiced during the class time. The client is invited to the class at the 3rd week to meet with the students and discuss their current business functions and business needs. Students follow the Hoffer's systems development framework to work through the five phases of SDLC, planning, analysis, design, implementation and maintenance (Hoffer, George, & Valacich, 2011). Each phase is scheduled for 2 to 3 weeks. The students' service learning activities and the primary deliverables in each phase are described as follows.

The first phase is planning. In this phase, students will identify the organization's problems and the needs for the new system. Information needs of the organization as a whole

will be examined, and the service learning project to meet these needs are proactively identified. These needs can then be prioritized and translated into a plan including a schedule for developing new major system. Two additional student activities are also performed during the planning phase: the formal, yet still preliminary, investigation of the system problem or opportunity at hand and the presentation of reasons why the system should be developed for the organization. A critical step at this point is determining the scope of the proposed system. The primary deliverables from the planning phase are the project plan documents such as the project scope statement, an estimated schedule of the service learning project, a description of task assignment among team members, and feasibility analyses.

The second phase is analysis. During this phase, the students thoroughly study the client's current procedures used to perform their tasks. Analysis has two sub-phases. The first is requirements determination. In this sub-phase, students work with client to determine what the client wants from the proposed system. In the second part of analysis, students study the requirements and structure them to perform process modeling. The primary deliverables from the analysis phase are: a set of data flow diagrams and entity relationship diagrams including the descriptions of attributes and data type definitions.

The third phase is design. During the design, students convert the description of the recommended solution into logical and then physical system specifications. The deliverable of the design phase is the physical system specifications for all database tables, forms and reports. They should be in a form ready to be turned over to student programmers and other system builders for construction.

The fourth phase is implementation. Implementation includes coding, testing, and installation of the new information system. Implementation activities also include initial user support such as the finalization of documentation, training sessions if requested, and user manual for the new database system. The prototype presentations to the client will be scheduled to present the up-to-date project progress and collect client's feedback. The final presentation to deliver the final product to the client is scheduled to the end of implementation. The client and key users are invited to the presentation classes to view students' demonstration of their product. The primary deliverables from the implementation phase are user manual for the new information system, testing results and the completed information system in production.

The fifth and the final phase is maintenance. The maintenance phase is scheduled to the last week of the semester. When the system is operating in client's office, if the client staff find problems with how it works or may think of better ways to perform its functions, the students can make the changes to the system if the changes are within the project scope and time allowed. Since the service learning project will be delivered by the end of semester, the future user assistance would fall to the instructor's task or the future classes for improvements. If there are new system needs or enhancements requested, they can certainly build into the next service learning project in the future semester. Because the maintenance phase of the SDLC is basically a subset of the activities of the entire development process, the deliverables and outcomes from

the process are the development of a new version of the information system and new versions of all design documents developed or modified during the maintenance process.

STUDENT REFLECTION AND ASSESSMENT

According to the study of Moffat and Decker, their study uses reflection assignments such as journals to assess students' perceptions on service learning (Moffat & Decker, 2000). Peer review is also commonly used in evaluating students' performance in group projects (Goode & Teh, 2005). Kolb's experiential learning cycle (Figure 1) also provides a practical framework to assess students' learning outcomes. Kolb's model claims that the most effective learning requires students' involvement in a continuous learning cycle of concrete experience, reflective observation, abstract conceptualization and active experimentation (Kolb, 1984).

Figure 1: Kolb's Experiential Learning Cycle
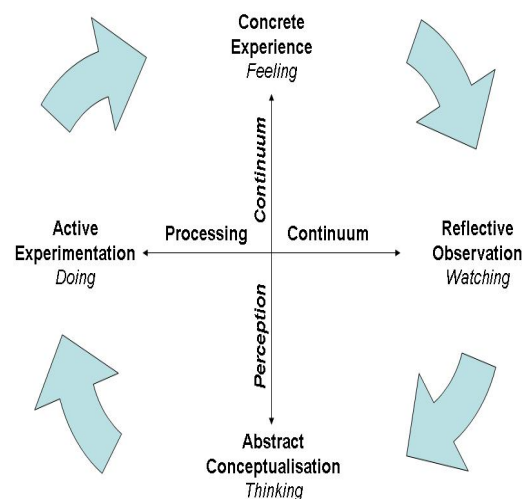
The assessment design in the present service learning project is revised from Wei's student assessment plan for their senior service-learning capstone course. Wei's student assessment plan is based on Kolb's experiential learning cycle that students are evaluated on the basis of their individual contributions as well as the overall performance of their team to see if they meet the learning objectives (Wei, Siow, & Burley, 2007). The instructor and client are jointly responsible for assessing students' work. Team members are also required to evaluate each other's work. Throughout the course, students, client and instructor should complete the following highly effective reflection and assessment activities during the semester.

1. Task Responsibility Matrix. Each team is required to fill in and update its team members' task responsibility in a pre-designed matrix for each SDLC phase (appendix A).

2. Discussions. Discussions are the team and individual discussions in classes and online in Blackboard. The discussions are to clarify the questions, concerns and/or understandings of the content of the project tasks or expected outcomes.

3. Project Journals: Each student shall journal their reflection experiences every week as they begin the service learning project from the first phase to the last phase online in Blackboard. Students should post their reflections to record their personal reflections, contributions and learning experiences undertaken in the present week. Students should also post responses to at least two other postings from their classmates (appendix B).

4. Prototype Presentations. Each student team presents their project progress in the prototype presentations to the community partner at the week of 10 and 13 to collect the feedback and expectations from the community partner.

5. Final Presentation: Students will present the finished project documents, major deliverables and the finished information system to the client; other interested community leaders, students, faculty members and administrators from the campus are invited as well.

6. Reflection Report. Students are required to submit an individual reflection report to assess their project experience. The reflection report should describe the progress that student has made in accomplishing the project. The reflection report should discuss the primary challenges of the project and how these challenges were addressed and what lessons were learned. The final report can also describe a unique success or a "great story" that student may has had during the project (appendix C).

7. Peer Evaluation: Students are required to assess their team members' performance at the end of the semester from the perspectives of academic achievement, teamwork and communication, collaboration behavior and ethical dimensions (appendix D).

8. Student Course Evaluation. Students are required to submit an individual online course evaluation administrated by the university at the end of the semester. The student course evaluation is to provide the students' evaluations on the instructor and the course overall.

9. Client Assessment. In the students' final presentation, the attended client board members need to complete a client assessment for each project team's performance. The client assessment is to assess each team's competencies in skills, communication, teamwork, resourcefulness, community awareness and professional behavior and ethics categories ranked from excellent (5) to poor (1) (appendix E).

10. Faculty Assessment. In the students' final presentation, the instructor of the service learning course needs to complete a faculty assessment using the same assessment form as the client assessment for each individual student's performance. The faculty assessment is to assess each student's competencies in skills, communication, teamwork, resourcefulness, community awareness and professional behavior and ethics categories ranked from excellent (5) to poor (1) (appendix F).

This ongoing reflection process supports the students as they learn the system analysis and design and build the new information system to continuously improve the required deliverables. Sharing their reflections in online discussions helps the students gain understanding of the needs of different learners.

IMPACTS

The impacts of this system analysis and design course designed with a service learning project can bring numerous positive influences to students, faculty, department and university, local community and the field of service learning. Because the service learning project is unique in that community involvement is central to the course, students will engage in learning and reflection to a greater extent than they otherwise would. The students' role is beyond that of a volunteer; they are responsible for making connections to the academic content. Academically, the service learning project allows students to expand their knowledge and skills in information system design, database design and project management that will grow students' foundation in future system analysis and design projects and increase their confidence in future career opportunities. Professionally, this service learning project provides students with valuable real world experience to realize what a system analysis and design job may require at the workplace. The students' understanding of the information technology career that they are pursuing can be increased, the students' work ethic through the service learning project can be improved, and the students' satisfaction in college learning by providing a service to a community organization can be increased.

The faculty, as an instructor of the service learning course can advance his/her teaching methods and course materials through the service learning project. As the project manager of the service learning project, the faculty can learn the importance of project communication between the project teams and community partner. The faculty's professional development can benefit greatly from this opportunity by designing and delivering the service learning project. However, the positive impact of a service learning course is not costless. The instructor of the service learning course would require more flexibility, more willingness to adapt the course to client needs, and more time commitment during the semester.

The service learning project can add another service learning course to the department and the college. This experience can be used as a course design template for future classes and other faculty members who would like to design a service learning course. The service learning project definitely strengthens the university mission and its connection to the local community. The business community benefits from the students and the students have the opportunity to understand and address the community issues.

This service learning project addresses the community issues by creating an information system to allow the client staff members to manage and improve their business operations. It is important for the client office to have a database that is easy to enter and update the members and the community information without the use of well-trained technical staff. This business need is critical to the client office due to the lack of personnel, money and the size of the office.

Service learning is a valuable instructional methodology but it is little used in system analysis and design courses. Students major in the Computer and Information Technology program need to learn not only the concepts and techniques in system analysis and design, but

also need to gain the real world experience before joining the workforce. Service learning is one of the best approaches for a system analysis instructor to enhance students' real world experience. This course design demonstrates a complete and successful course model in the field of service learning in systems analysis and design. Through the service learning project, the students can be enabled to develop systems analysis and design skills while enhancing their hands-on project experience and civic engagement. Overall, the implementation of this service learning project should provide students, faculty, department and university, local community and the field of service learning many benefits on many levels.

CONCLUSIONS

Adopting Service learning component in system analysis and design course can enhance students' learning experience, but without careful planning and design, students can wind up learning far less than the original learning expectation or internalizing exactly the opposite lessons instructors intend. For example, if assessments and expectations are not made clear, students may end up performing low accomplishment, without achieving the learning goals for the course. In conclusion, this paper has shown that the service learning course, students are able to articulate system analysis and design knowledge in areas addressed by the course, and relevant to the education of information system development. With thoughtful planning, analysis, design and deliberate implementation, service learning can foster positive relationships between the university and the larger community and provide meaningful educational experiences to students. Future studies will aim to more clearly identify the role played specifically by the service and learning components of the system analysis and design course in the students' achievement of this knowledge, but the value of the present study is that it has identified the impacts of service learning attributable to this course.

REFERENCES

DWD. (n.d.). Hot Jobs Now. Retrieved March 5, 2012, from Hoosier Hot 50 Jobs: https://netsolutions.dwd.in.gov/hh50/jobList.aspx

Goode, S., & Teh, S. (2005). Peer Review to Support Student Assessment in Teams. Journal of Information Systems Education, 16(4), 379-383.

Hoffer, J., George, J., & Valacich, J. (2011). Modern Systems Analysis and Design (6th ed.). Pearson.

Johnson, R., & Johnson, P. (2005). Service Learning in IS: Teaming with Community and Industry. The Ninth Pacific Asia Conference on Information Systems, (pp. 1185-1191). Bangkok, Thailand.

Kolb, D. (1984). Experiential Learning: Experience as a Source of Learning and Developmen. Englewood Cliffs, NJ: Prentice Hall.

Lazar, J. (2001). Teaching Web Design Through Community Service Projects. Journal of Informatics Education and Research, 2(2), 71-75.

Lazar, J., & Lidtke, D. (1999). Implementing Service Learning in an Online Communities Course. 14th Annual Conference, International Academy of Information Management, (pp. 22-27). Charlotte, NA.

Lazar, J., & Lidtke, D. (2002). Service-Learning Partnerships in the Information Systems Curriculum. Managing IT?Community Partnerships in the 21st Century (pp. 1-16). Idea Group.

Linos, P., Herman, S., & Lally, J. (2003). A Service Learning Program for Computer Science and Software Engineering. Annual Joint Conference Integrating Technology into Computer Science Education, (pp. 30-34). Thessaloniki, Greece.

Moffat, J., & Decker, R. (2000). Service-Learning Reflection for Engineering: A Faculty Guide. Design that Matters: Concepts and Models for Service Learning in Engineering (pp. 31-39). American Association for Higher Education.

Rose, J., Rose, A., & Norman, C. (2005). A Service Learning Course in Accounting Information Systems. Journal of Information System, 19(2), 145-172.

Sadla, C., Doheny, M., Panthofer, N., & Anaya, E. (2003). Critical Thinking in Students' Service learning Experiences. College Teaching, 51, pp. 99-103.

Wei, K., Siow, J., & Burley, D. (2007). Implementing Service-Learning to the Information Systems and Technology Management Program: A Study of an Undergraduate Capstone Course. Journal of Information Systems Education, 18(1), 125-136.

APPENDIX A. TASK RESPONSIBILITY MATRIX

Project Name: Team Name: Prepared by: Date:			Legend: P = Primary S = Support			
Week	**Task ID**	**Task Description**	**Team Member A**	**Team Member B**	**Team Member C**	**Team Member D**
Planning Phase						
	1		S	S	S	P
	2					
	3					
Analysis Phase						
	4					
	5					
	6					
Design Phase						
	7					
	8					
	9					
Implementation Phase						
	10					
	11					
	12					
Maintenance Phase						
	13					
	14					
	15					

APPENDIX B. STUDENT PROJECT JOURNAL

Due by the end of each week from Week 3 – 16. No more than 2 pages per week, double-spaced, 5 bullets each category.

Week #: _____ Date submitted: _____

Contributions, tasks & activities accomplished in this week:
Uncompleted or deferred tasks & activities:
Reflections & notes on particular experiences in this week:
Lessons learnt in this week:
Other observations (if any):

APPENDIX C. REFLECTION REPORT

1. Describe the progress you have made in accomplishing your project. Note any deviation from your original System Requirements Checklist. Discuss in detail your primary activities and accomplishments during this project period in each important milestones (phases).

2. Discuss the primary challenges of your project and how these challenges were addressed and what lessons were learned.

3. Describe a unique success or a "great story" that you may have had during the project. Particularly are stories that include the impact this project had on quantifiable results, transformative events, and/or innovative problem solving that could not have happened without the experience from this service learning project.

4. Describe the impact of this service learning project had on your learning and development at university.

5. Describe the impact of this service learning project have on your future career or job opportunity. Provide specific example(s).

6. Describe how your project addressed community issues. Provide specific example(s).

Appendix D. Peer Evaluation
(This is to provide the assessment on each of your team member)

Rating Scale: 5 - Exceptional. Exceeds all expectations.
                4 - Satisfactory performance or competent. Meets expectations.
                3 - Do fair share of work.
                2 - Shows some effort or promise but still lacking.
                1 - Serious deficiencies and/or lack of effort. Fully inadequate.
                NA - Not applicable or insufficient opportunity to observe performance.

Team Name: _____

Team Member Name	Work	Communication	Cooperation	Leadership	Observations on Professional Behavior & Ethical Issues

APPENDIX E. CLIENT ASSESSMENT

Team Name: _____ Date: _____

Competencies	Excellent 5	4	3	2	Poor 1
Skills (Technical, Managerial and/or Research where applicable) – Ability to apply and demonstrate skills to assigned project					
Communication – Ability to listen, ask questions and communicate effectively using written and oral presentation methods					
Teamwork – Ability to participate, demonstrate accountability and function responsibly as a member on a multidisciplinary team					
Resourcefulness – Ability to acquire and apply knowledge from outside standard courses or avenues					
Community Awareness – Demonstrated understanding of client's organization and needs and benefits of the project to the community					
Professional Behavior and Ethics – Demonstrated understanding and awareness of professional and ethical aspects or issues encountered in their project					

Remarks: _____

_____

_____

_____

Client Name: _____

Thank you for your input!

APPENDIX F. FACULTY ASSESSMENT

Student Name: _____ Team Name: _____ Date: _____

Competencies	Excellent 5	4	3	2	Poor 1
Skills (Technical, Managerial and/or Research where applicable) – Ability to apply and demonstrate skills to assigned project					
Communication – Ability to listen, ask questions and communicate effectively using written and oral presentation methods					
Teamwork – Ability to participate, demonstrate accountability and function responsibly as a member on a multidisciplinary team					
Resourcefulness – Ability to acquire and apply knowledge from outside standard courses or avenues					
Community Awareness – Demonstrated understanding of client's organization and needs and benefits of the project to the community					
Professional Behavior and Ethics – Demonstrated understanding and awareness of professional and ethical aspects or issues encountered in their project					

Remarks: _____
_____
_____
_____

Faculty Name: _____

Thank you for your input

A SIMPLE MODEL FOR ESTIMATING ENROLLMENT YIELD FROM A LIST OF FRESHMAN PROSPECTS

J. Bryan Hayes, Mississippi College
Retha A. Price, Mississippi College
Rice P. York, Mississippi College

ABSTRACT

This study develops a simple binary logistic regression model for estimating total enrollment yield and enrollment probability for individual accepted applicants using cross-sectional data from a private, liberal arts university. The model uses three predictor variables: discount amount offered, ACT score and state residence, to predict the enrollment decisions of accepted applicants with slightly over 78% accuracy.

INTRODUCTION

An on-going challenge facing many college administrators is predicting freshman enrollment from year-to-year. Institutions that are highly dependent on tuition dollars, in particular, are concerned about their ability to accurately predict enrollment in order to facilitate the budgeting process. A significant body of research examining the issue of year-over-year college persistence (e.g., St. John, Andrieu & Oesher, 1994; Cabrera, Nora & Castaneda, 1992) indicates that many institutions are reasonably proficient at estimating their retention rate for returning students. However, estimating the matriculation rate for accepted applicants often proves more difficult. Previous research in this area has produced inconsistent results, perhaps due to the idiosyncratic nature and circumstances of the institutions studied. Thus, the purpose of this study is to develop a simple statistical model that can be used to both estimate enrollment yield and predict the likelihood that an accepted applicant will choose to matriculate.

LITERATURE REVIEW

A variety of studies has focused on factors that influence college enrollment and enrollment persistency. In general, these studies have identified two categories of variables believed to significantly impact enrollment decisions. The first category includes academic, demographic and institutional variables such as age, ethnicity, high school experience, grade-point average, parent's education level and scores on standardized test such as the American College Test (ACT) or Scholastic Aptitude Test (SAT), while the second includes economic and

financial variables such as tuition costs, income and various forms of student aid (Braunstein, McGrath & Pescatrice, 1999). These studies have shown that financial aid positively impacts enrollment decisions and that type of financial aid provided (i.e., loans versus grants) interacts with demographic factors such as income and ethnicity to differentially influence the enrollment decision. For example, low-income students have been shown to be more responsive to grants while middle-income students tend to be responsive to both loans and grants (St. John, 1990a, 1992, 1993, 1994).

Because it is dichotomous, numerous studies have employed logistic regression as the primary analytical tool for predicting the enrollment decision of prospective students (e.g., Ledesma, 2009; Goenner and Pauls, 2006; DesJardins, 2002; Bruggink and Gambhir, 1996). Variables that have been used as predictors include a variety of geographic, demographic and social background variables (i.e., race, family income, etc.), academic performance and achievement variables (i.e., ACT and SAT scores, high school GPA, etc.), variables related to student recruitment (i.e. contact with the student prior to application, where the applicant first learned about the school, whether or not the applicant made a campus visit, etc.) and financial aid variables (i.e. discount offered, Pell grant amount, etc.) as well as interactions among these variables.

Braunstein, McGrath & Pescatrice (1999) found that family income, receipt of financial aid, type of financial aid package (i.e., grant, loan, or work-study) and SAT score influence the enrollment decision, and that wealthy applicants and those with the highest SAT scores are less likely to enroll irrespective of financial aid offers. Ledesma (2009) developed a model that predicted enrollment with 64% accuracy and found that high school GPA was negatively associated with the decision of applicants to enroll to a small, private, liberal arts school. They also found that an applicant's selection of the college under study as first choice was a highly significant predictor, and suggested that it "may be attracting a group of applicants who are more or less settled on coming to the school" (pg. 324). The Ledesma study is particularly relevant to the current study in that it applied to accepted applicants to an institution with characteristics similar to those of the school in this study (small, private, liberal arts, religious affiliated). Goenner and Pauls (2006) developed a series of models that predicted enrollment with 89% accuracy using prospective student contact, geographic and demographic variables, as well as interactions among these variables. However, their study focused on inquirers (rather than applicants) to a large, public university. Other studies have used a similar analytical approach and similar variables to predict with reasonable accuracy whether a student who has either applied or been admitted enrolls at a particular institution (e.g., DesJardins, 2002; Bruggink and Gambhir, 1996). A shared characteristic of these models is that they use a relatively large number of predictor variables often obtained from a variety of sources. Some of the data used in these studies may not be easily accessible for the typical small college or university.

A related stream of research has dealt with the sensitivity of students to changes in tuition as a factor influencing enrollment decisions. Many of these studies have been based on

aggregate, time-series analyses attempting to quantify the relationship between tuition increases and enrollment on a national level, thereby estimating what is essentially an "industry demand curve" (Parker and Summers, 1993 p. 311). Others have used cross-sectional data to estimate the impact of tuition differences on enrollment across a sample of institutions within a state or across states (e.g., Knudsen and Servelle, 1978) and a few have focused on the demand curve for individual institutions (e.g., Funk, 1972). Although these studies differ widely in methodologies and data sources employed, as well as specific results, their findings generally agree on two conclusions: (1) that student decisions about whether to enroll in college are significantly and positively influenced by price cuts (whether in the form of grants, scholarships, or other forms of financial aid), and (2) that decisions about which school to attend are significantly influenced by changes in the relative prices of the competing alternatives. Some studies have also found that certain groups are more sensitive to changes in price than others. For example, McPherson and Schapiro (2001) found that students from low-income households exhibit far greater sensitivity to changes in price than do those from affluent and middle income households. In fact, they found little evidence that "increases in net tuition cost inhibited enrollment" for the range of prices included in their study among more affluent students, (McPherson and Schapiro, 2001 p. 317).

Two meta analyses of student price sensitivity studies have been conducted. Leslie and Brinkman (1987) reviewed 25 studies that were published between 1967 and 1982. Heller (1997) reviewed an additional 20 studies conducted between 1982 and 1996 and compared the findings to the earlier work. The standardized measure of price response used for comparative purposes in these studies was the Student Price Response Coefficient (SPRC), which is defined as the "change in the college participation rate of 18-24 year-olds for every $100 increase in tuition prices" ceteris paribus (Heller, 1997 p. 626).

Leslie and Brinkman (1987) calculated SPRCs ranging from -.2 to -2.4, with a mode of -.6. They concluded that "the mean price response is about .7 percentage points", meaning that a $100 increase in tuition price would result in a participation rate drop of about three-quarters of a percentage point (p. 188). This conclusion was based on the 1982-1983 average weighted higher education price of $3,420 for tuition and room and board. They further projected that "U.S. enrollments would decline by about 2.1% for each $100 price increase, all other factors equal" (p. 189). Observing that college participation rates had grown over the twenty years of their study despite increasing college prices, the authors noted the impact of other demand factors including changes in income, consumer taste and preferences, and perceived value.

Heller's (1997) results essentially confirmed and extended the earlier work of Leslie and Brinkman (1997). Heller found that "Increases in tuition lead to declines in enrollment. The consensus among the studies reviewed is that every $100 increase in tuition results in a drop of enrollment of .5 to 1.0 percentage point across all types of institutions" (p. 650). Heller predicted that price sensitivity would likely increase further as tuition levels continue to creep ever higher.

Some of the studies reviewed in the meta-analysis (e.g., Savoca 1990) focused on application for admission rather than matriculation. These studies revealed that, by treating the decision to apply to college as an exogenous variable, some price sensitivity studies tend to understate true price effects by ignoring the impact of price increases on the decision to *apply* for college admission. Also noteworthy were the results of some financial aid studies (e.g., Mumper 1996) suggesting that increasing discounts may fail to adequately mitigate increasing tuition prices, particularly among lower-income students. These studies suggested that enrollment decisions of prospective students are more adversely affected by increases in the "sticker price" because information about tuition costs is "much more widely known and available" than is information about financial aid programs (Mumper 1996, p. 45). However, the findings of these studies taken as a whole are somewhat equivocal, indicating a need for further research in this area.

DATA AND METHODOLOGY

The data consisted of records for 1,184 accepted, traditional freshman applicants for the 2009-2010 academic year to a small, private, liberal arts university located in the southeastern U.S. Binary logistic regression was utilized to obtain predictions of (1) the total percentage of accepted applicants who would choose to matriculate and (2) the probability that each applicant would choose to enroll. A logistic regression model was fitted of the form

$$ln\ [P/(1-P)] = \alpha + \beta_1 X + \beta_2 Y + \beta_3 Z + \varepsilon$$

where P is the probability of an accepted applicant enrolling, X is the vector of ACT scores of accepted applicants, Y is the vector of the dollar discount offered and Z is a vector representing the applicant's residence within or outside of the state. ACT score was used to represent academic achievement, while discount (the amount of discount offered to the applicant) comprised the cost indicator. Residence status was operationalized as a dummy variable with 1 indicating in-state residence and 0 representing out-of-state residence.

While these choices were consistent with previous enrollment yield studies (e.g., Braunstein, McGrath & Pescatrice, 1999; Moore, Studenmund & Slobko, 1991), the model specification excluded numerous variables that have been previously shown to be significant enrollment predictors, such as student or family demographic characteristics, contact with the student prior to application, choice of major, forms of financial aid other than the discount, cost of substitutes, institutional quality indicators and time indicators. The reason for this was the desire to produce a parsimonious and simple statistical model; a model for which data may be easily obtained and processed but which provides a useful level of predictive accuracy. Variables representing the influence of the passage of time (including adjustments for inflation) that have been used in other studies were unnecessary since the model was estimated using data from a

single academic year. Likewise, since this analysis was conducted using data collected at the individual applicant rather than the institutional level, some variables that have been used as predictors in other studies, such as the mean "cost of substitutes" (similar to that employed by Buss, Parker and Rivenburg, 2004) were not relevant to the current study.

DATA ANALYSIS

The database was randomly divided into two independent data sets, a modeling set and holdout set, each containing 592 records. The logistic regression was first fitted using the modeling data and then validated by applying it to the holdout data set. The results of the logistic regression analysis are depicted in Tables 1-4.

Table 1 - Omnibus Tests of Model Coefficients		Chi-square	df	Sig.
Step 1	Step	125.692	3	.000
	Block	125.692	3	.000
	Model	125.692	3	.000

Table 2 - Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	650.913[a]	.199	.267
a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.			

Table 3 - Variables in the Equation		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1	ACT	-.263	.039	45.225	1	.000	.769
	Doffer	.001	.000	75.123	1	.000	1.001
	Instate	-.041	.196	.044	1	.834	.960
	Constant	.982	.624	2.477	1	.116	2.670

The model produced a –2 log likelihood (LL) value of 650.913 (see Table 2). The –2 LL is a mathematical transformation of the probability of the observed results that is customarily used as an indicator of model fit. The model chi-square value of 125.692 (p ≤ .000) depicted in Table 1 is a test of the difference in –2 LL between the model with only a constant and the model with all three predictor variables entered. This is analogous to the F-test in linear regression. A significant p-value indicates that at least one of the model coefficients is significant. Other measures of model fit were also significant. For example, the Nagelkerke R^2 (see Table 2) indicates that about 27% of the "variation" in the enrollment decision was explained by the logistic regression model. Although this is not particularly large, the principle aim of the model

was not to "explain" the enrollment decision but to predict likelihood of enrollment. In this sense, the model was successful. The classification table depicted in Table 4 compares the observed and predicted group memberships when applicants with a predicted probability of .5 or greater were classified as enrolling. As the table shows, the model correctly classified 75.7% of applicants using a cutoff value of .5. The model predicted total enrollment yield of 31.6% of accepted applicants, compared to the observed value of 43.6% (72.5% of actual enrollment).

			Predicted					
Observed			Selected Cases[a]			Unselected Cases[b]		
			enrolled		Percentage	enrolled		Percentage
			0	1	Correct	0	1	Correct
Step 1	Enrolled	0	285	35	89.1	301	25	92.3
		1	103	144	58.3	95	126	57.0
		Overall Percentage			75.7			78.1

Table 4 - Classification Table[d]

a. Selected cases 592 from the first 1184 cases (SAMPLE) EQ 0
b. Unselected cases 592 from the first 1184 cases (SAMPLE) NE 0
d. The cut value is .500

In order to validate the model, it was applied to a randomly selected holdout sample of 50% of the 2009-10 accepted applicants. Although a model usually fits the sample used for its estimation better than it fits the population, classification accuracy for the holdout sample was 78.1% using a cutoff of .5, as shown in Table 4 under "Unselected Cases". This substantially exceeds the classification accuracy of 64% reported by Ledesma (2009) for out of sample data using a model with 10 predictor variables, although it was not as strong as the 89% reported by Goenner and Pauls (2006) in a series of models containing up to 20 significant predictor variables. As noted previously, the prospective student population examined in the Ledesma study had more in common with that examined in the current study. Nevertheless, like both the Ledesma (2009) and Goenner and Pauls (2006) models, ours was better at predicting who will not enroll than who will enroll. Our model correctly classified 89.1% of those in the holdout sample who chose not to enroll compared to 58.3% of those who did (see Table 4).

For additional model verification, the model was applied to a randomly selected previous year's data (2007-08) in order to rule out the effects of any systematic bias in the 2009-10 data. Classification accuracy for the 2007-08 data remained reasonably strong and consistent at 70.1%.

Likelihood Ratio Tests were employed to test the significance of the individual predictor variables. The tests indicated that ACT score and discount amount offered were significant ($p \leq$ .000). The Exp(B) statistic reported in Table 3 indicates the change in the odds ratio for each predictor variable. The odds ratio [Prob (event) / Prob (no event)] indicates the change in the odds for a case of the dependent variable associated with a one-unit change in the predictor variable, all else held constant. For example, an increase of $1 in the amount of discount

increases the odds of enrollment by a factor of 1.011. The fractional Exp(B) value for ACT score reflects its negative coefficient; an increase of 1 unit in the ACT score *decreases* the odds of enrollment by a factor of .769.

DISCUSSION

The purpose of this study was to develop a simple statistical model that can be used to predict enrollment yield and the probability of enrollment for individual applicants. A binary logistic regression model was estimated consisting of three predictor variables: (1) amount of discount offered to the applicant, (2) ACT score, and (3) in-state/out-of-state residence. Two of these, amount of discount offered and ACT score were significant predictors. The model (containing all three predictor variables) predicted the enrollment decisions of randomly selected, out of sample accepted applicants with slightly over 78% accuracy and predicted 72.5% of observed enrollment yield.

Not surprisingly, our findings were largely consistent with previous research that has shown financial aid variables to be significantly related to the enrollment decision (e.g., Braunstein, McGrath & Pescatrice 1999, St. John 1990a, 1992, 1993 & 1994). Likewise, our finding that ACT score was negatively associated with the decision to enroll is consistent with the findings of other enrollment studies (e.g., Ledesma 2009, Braunstein, McGrath & Pescatrice 1999). Essentially, better students have more choices of where to attend college and are more likely to apply to and attend other schools. However, while previous studies typically have utilized numerous variables obtained from a variety of sources, the current model requires only two variables that are readily available to any institution. Our model was able to predict enrollment decisions with a level of accuracy comparable to models employing more variables. The results were verified on a holdout sample of data from the year of the study and on a randomly selected prior year's data.

Several caveats should be kept in mind before attempting to use this model. First, since the study was based on data representing a single institution, the results may not be generalizable. At least, the model should be applied only to institutions with characteristics similar to the one for which the study was conducted. Second, the model should not be applied to transfer students, non-traditional applicants or to any group of prospective students for whom the discount policies are significantly different from those for traditional applicants. Third, the sample of prospective students used in this study had received notification of whether or not a discount would be offered and, in the case of those who were offered a discount, the amount. Obviously, other factors influencing enrollment would likely carry greater importance prior to such notification. Finally, as economic and social conditions influencing college enrollment change over time, the model should be periodically re-estimated and verified with current data.

REFERENCES

Braunstein, A., M. McGrath & D. Pescatrice (1999), "Measuring the Impact of Income and Financial Aid Offers on College Enrollment Decisions," *Research in Higher Education*, 40(3), p. 247-259.

Bruggink, T. H., and Gambhir, V. (1996), "Statistical Models for College Admission and Enrollment: A Case Study for a Selective Liberal Arts College," *Research in Higher Education*, 37(2), p. 221–240.

Buss, C., J. Parker & J. Rivenburg (2004), "Cost, Quality and Enrollment Demand at Liberal Arts Colleges, *Economics of Education Review*, 23, p. 57-65.

Cabrera, A.F., A. Nora, and M.B. Castaneda (1992), "The Role of Finances in the Persistence Process: A Structural Model," *Research in Higher Education*, 33(5), p. 571-593.

DesJardins, S. L. (2002), "An Analytic Strategy to Assist Institutional Recruitment and Marketing Efforts," *Research in Higher Education*, 43(5), p. 531–553.

Funk, H.J. (1972), "Price Elasticity of Demand for Education and a Private University," *The Journal of Educational Research*, 66(3), p. 130-134.

Goenner, C.F. & K. Pauls (2006), "A Predictive Model of Inquiry to Enrollment," *Research in Higher Education*, 47(8), p. 935-956.

Heller, D.E. (1997), "Student Price Response in Higher Education: An Update to Leslie and Brinkman," *The Journal of Higher Education*, 68(6), p. 624-659.

Knudsen, O. & P. Servelle (1978), "The Demand for Higher Education at Institutions of Moderate Selectivity," *American Economist*, 22, p. 30-34

Ledesma, R. (2009), "Predictive Modeling of Enrollment Yield for a Small Private College," *Atlantic Economic Journal*, 37, p. 323-324.

Leslie, L.L. & P.T. Brinkman (1988), "Student Price Response in Higher Education," *The Journal of Higher Education*, 58, p. 181-204.

McPherson, M. & N. Schapiro (2001), "Does Student Aid Affect College Enrollment? New Evidence on a Persistent Controversy," *American Economic Review*, 81, p. 311-321.

Moore, R.L., A.H. Studenmund & T. Slobko (1991), "The Effect of the Financial Aid Package on the Choice of a Selective College," *Economics of Education Review*, 10, p. 311-321.

Mumper M. (1996), *Removing College Price Barriers: What Government Has Done and Why it Hasn't Worked*, Albany, NY: State University of New York Press.

Savoca, E. (1990), Another Look at the Demand for Higher Education: Measuring the Price Sensitivity of the Decision to Apply to College," *Economics of Education Review*, 9(2), p. 123-134.

St. John, E.P. (1990a), "Price Response in Enrollment Decisions: An Analysis of the High School and Beyond Sophomore Cohort," *Research in Higher Education*, 31(2), p. 161-176.

St. John, E.P. (1992), "Workable Models for Institutional Research on the Impact of Student Financial Aid," *Journal of Student Financial Aid*, 22(3), p. 13-26.

St. John, E.P. (1993), "Untangling the Web: Using Price Response Measures in Enrollment Projections," *The Journal of Higher Education*, 64(6), p. 676-695.

St. John, E.P. (1994), "Assessing Tuition and Student Aid Strategies: Using Price-Response Measures to Simulate Pricing Alternatives," *Research in Higher Education*, 35(3), p. 301-334.

St. John, E, S. Andrieu & J. Oesher (1994), The Influence of Student Aid on Within-Year Persistence by Traditional College-Age Students in Four-Year Colleges, *Journal of Student Financial Aid*, 22(1), p. 455-480.

Parker J. & J. Summers (1993), "Tuition and Enrollment Yield at Selective Liberal Arts Colleges," *Economics of Education Review*, 12(4), p. 311-324

THE MISSING LINK IN THE CCSS INITIATIVE: PROFESSIONAL DEVELOPMENT FOR IMPLEMENTATION

Susan Jenkins, Idaho State University
Joachim Jack Agamba, Idaho State University

ABSTRACT

The Common Core State Standards (CCSS) are research-based, internationally benchmarked, and rigorous mandates that include 21st century skills and reliable pathways toward college and career readiness (CCSS Initiative, 2011). Fundamentally, the CCSS identify what should be taught, not how the standards should be taught. The missing link in the CCSS initiative is professional development to support implementation. The time is now for effective professional development. The stakes are high. This paper discusses "what constitutes effective teacher professional development." Six design features are identified and then compared to Idaho TIA, a professional development model for implementing the CCSS within a collaborative PK-16 seamless educational system. Idaho TIA rests on the fact that professional development must be designed to support teachers, to strengthen instructional practice, to build collaborative partnerships, and to deliver high-quality, standards-based education for every child.

Keywords: *Common Core State Standards (CCSS); collaborative partnerships; implementation; instructional practice; student achievement; teacher professional development.*

INTRODUCTION

The Common Core State Standards (CCSS) initiative, developed by the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO) and endorsed by the American Federation of Teachers (AFT), has been adopted by 46 states and the District of Columbia (Center on Education Policy, 2012). In a recent Center on Education Policy (CEP) survey, 35 states agreed that the increased rigor of the CCSS will improve student learning and as such the CCSS merit immediate implementation; however, "states face challenges in fully implementing the standards, particularly in finding adequate funding… [and] do not expect to fully implement the new standards until school year 2014-15" (2012, p. 1). Aggressive and strategic CCSS implementation is essential as the first national assessment is scheduled to begin in school year 2014-2015 (CEP, 2011).

The missing link in the CCSS initiative is professional development to support implementation. The stakes are high. Effective teacher professional development must be designed which begins by deconstructing the CCSS and helping teachers understand the differences between current state standards and the new CCSS. The latter are more evidence-based, more globally-informed, and yet, more compressed; therefore, the CCSS require a totally different approach.

Results of the CEP (2012) survey identified an additional challenge associated with implementation of the CCSS. It is absolutely crucial for policymakers to be aware that "fully implementing the CCSS is a complex undertaking that will take time and will affect many aspects of the education system-from curriculum, instruction, and assessment to teacher policies and higher education" (CEP, 2012, p. 10). The CCSS contain the necessary 21st century skills and reliable pathways toward college and career readiness (Common Core State Standards Initiative, 2011), a just-in-time initiative allowing the educational system of this country to be internationally competitive and yet, one in which "no child is left behind."

COLLEGE AND CAREER READINESS VIA THE CCSS

The Common Core State Standards have been released for Mathematics; English Language Arts (ELA); and Literacy in History/Social Studies, Science, and Technical Subjects (Common Core State Standards Initiative, 2011). Central to the CCSS standards for English Language Arts (ELA) and for Literacy in History/Social Studies, Science, and Technical Subjects are the key strands of reading, writing, speaking, listening, and language (Common Core State Standards Initiative, 2011). The CCSS are an extension of a prior initiative designed to develop college and career readiness (CCR) standards. These initial CCR Reading, Writing, Speaking and Listening, and Language standards served as the backbone for the new CCSS.

The new CCSS are grade-specific, K-12 standards within the five literacy strands. The new CCSS translate the broad aims of the original CCR standards into age- and attainment-appropriate terms. According to the Common Core State Standards Initiative (2011), the underlying rationale behind the new CCSS is that these standards are crucial for success in college, where course content is more demanding, and for careers, because employers expect employees to be able to read and apply information within context.

COLLABORATION FOR PK-16 SEAMLESS EDUCATION

In addition to the aforementioned emphasis on college and career readiness, institutions of higher education have been called upon to collaborate with K-12 educators in an effort to design a PK-16 system within which the CCSS standards can be realistically and efficiently achieved (Common Core State Standards Initiative, 2011; Phillips & Vandal, 2011). Fundamentally, the CCSS identify *what* should be taught (learning objectives), not *how* the

standards should be taught (methods and curriculum). Therefore, higher education must be retained to partner in building a step-wise, incremental process for *unpacking* (deconstructing the CCSS into teachable objectives) and *implementing* (designing supports for instructional practice) these research-based, internationally benchmarked, and rigorous mandates.

Ultimately, K-12 and higher education must work toward a PK-16 seamless process. This collaboration should become a vision from elementary school through high school so that success in college is inevitable. A critical component in the seamless process is collaboration with university teacher education programs. The process can then come full circle as university teacher education candidates graduate with the knowledge and skills to successfully teach in a system driven by the CCSS and focused on college and career readiness. Additionally, university faculty who teach lower division general education courses should determine the pre-requisite knowledge necessary for these classes, and subsequently assure their vertical alignment with corresponding courses in grades 11 and 12. Careful attention to this part of the whole can lead to a framework that will foster a suitable design of course materials and assessment items which align grade 11, 12, and year one of undergraduate education. Such efforts toward PK-16 alignment are pivotal to the ultimate goal of a seamless educational effort.

PROFESSIONAL DEVELOPMENT TO IMPLEMENT THE CCSS

Although the CCSS represent a major step forward for education, there is a missing link in the initiative. Hirsh (2012) states, "While we are promoting radical change in creating a coherent national framework for what students should know and the way they learn, we have not yet committed to offering teachers the deep learning they will need to transform the way they work" (p. 1). Gene Wilhoit, executive director of the Council of Chief State School Officers, established the need for teacher preparation that is appropriate to the successful implementation of the CCSS: "What made you think you could transform teacher practice and student learning with traditional models of professional development?" (Hirsh, 2012, p. 1). "Too much of today's professional learning is not up to the task of supporting the substantive changes required of teachers to meet these new standards…" (Hirsch, 2012, p. 1).

New initiatives and legislation for K-12 education (e.g., No Child Left Behind, 2001, and most recently the CCSS, 2011), can typically be translated directly into new requirements for teacher professional development (Education Week, 2011; Desimone, 2009). In fact, there is frequently a one-to-one correlation between such mandates and the supports necessary for their implementation by teachers in the classroom. Therefore, the call for higher education to form collaborative relationships with K-12 educators in order to implement the CCSS, and to therefore increase student achievement, must be answered. This challenge embodies two fundamental issues: a) K-12 teachers will require well-designed professional development for the successful implementation of the CCSS and b) a mechanism must be designed that will successfully foster higher education and K-12 collaboration.

Although the call for K-12 and higher education partnering, cooperation, and shared focus is not new (Myran, Crum, & Clayton, 2010), the need for such is heightened. The time is now. With the aggressive challenge laid out by the CCSS, the two sides must find agreement on specifically how to ensure PK-16 seamless education. Regardless of the source or nature of a legislative mandate, one tenet remains constant: "We need to place a greater priority on strengthening the capacity of educators and building learning communities to deliver higher standards for every child" (Hunt, Jr., 2009).

Ultimately, the goal of the CCSS is to increase student achievement in K-12 education and prepare students to be college and career ready. Professional development is the key to make it happen. Therefore, this paper will describe the characteristics of quality professional development as discussed in the literature. The paper will also describe a successful teacher professional development program based on these best practice features. This program, Idaho Total Instructional Alignment (TIA), has been initiated to implement the CCSS through collaborative PK-16 efforts. Data collected from teachers and administrators participating in Idaho TIA indicate positive effects and improved practice in instructional planning, classroom teaching, and student assessment (Agamba & Jenkins, 2012).

LITERATURE REVIEW

What Constitutes Effective Teacher Professional Development?

Teacher professional development is pivotal to educational reform (Desimone, 2009; Wayne, Yoon, Cronen, & Garet, 2008; Guskey, 2002). The goal of teacher professional development is to increase student achievement and teachers generally embrace professional development programs because they believe such programs will help them become better teachers to that end (Guskey, 2002). There are several teacher development models (Desimone, 2009; DuFour, 2004; Guskey, 2002; Guskey, 2000), the majority of which have been deemed ineffective (Desimone, 2009; Guskey, 2002; Guskey, 2000), in large part because it is difficult to verify their effectiveness in improving classroom practices that subsequently lead to increased student achievement (Yoon, Duncan, Lee, Scarloss, & Shapely, 2007).

In this light, Desimone (2009) recommended the need to utilize specific core features of teacher professional development programs that have been identified in the literature, as sound methods to design those programs and to measure their outcomes. Yet, in spite of research-based concurrence on particular features of effective professional development, little is known about which specific features contribute to *teacher change* (Wayne, Yoon, Cronen, & Garet, 2008; National Center for Educational Statistics, 2005), a fundamental outcome of teacher training. For example, Guskey (2002) analyzed, in a proposed new model on teacher change, that the effects of teacher professional development which actually lead to teacher change happen only after teachers see desired learning outcomes in their students following classroom implementation. On

the other hand, Yoon, Duncan, Lee, & Shapley (2008) proposed a model that suggested teacher change occurs during, and directly following, professional development and consequently is evidenced prior to any measures of student achievement.

These views on teacher professional development are no less relevant to the new CCSS; perhaps, even more so. In fact, the new CCSS provide the kind of answer that Kennedy (1998) identified as necessary to provide a consensus on goals and standards, a *national curriculum* (p. 1). Teacher professional development must focus on helping teachers to determine *that they are teaching what they are supposed to be teaching, and students are learning what they are supposed to be learning* (DuFour, 2004; Guskey, 2002).

The CCSS are rigorous, compressed, and establish a framework for preparing all students to become college and career ready. Nonetheless, *what teachers know* and *how they teach* are the two pivotal practices which will ultimately affect student learning and achievement. Consequently, the stakes are even higher. After all, "it can be said, in most cases, that it is the teacher and management of classroom instruction that can be indicators or catalysts for student achievement" (Maldonado & Victoreen, 2002, p. 1). An additional consideration in the design of professional development for the CCSS is that teachers must continue teaching to current standards, as they simultaneously transition to the CCSS. Providers of teacher training must therefore take into consideration that educators are likely to be overwhelmed by multiple expectations originating from multiple entities (Haycock, 2012).

Answers to the question, "what constitutes quality teacher professional development" can vary. However, six features identified in the literature as crucial in the design and evaluation of teacher professional development by Hawley & Valli, 1999; Kennedy, 1998; Wilson & Berne, 1999 (as cited in Desimone, 2009) and the National Center for Educational Statistics (2005) are: *focus on content taught and methods used; opportunities for active learning; duration of training; collective participation; coherence or format; and alignment* (see Table 1).

Table 1: Critical Features of Teacher Professional Development The following table contains the six research-based features identified in the literature as crucial in the design and evaluation of teacher professional development.	
Hawley & Valli, 1999; Kennedy, 1998; Wilson & Berne, 1999 (as cited by Desimone, 2009).	**NCES (2005).**
Content Focus: What teachers learn that can improve instructional practice and increase student achievement.	*Focus on content and focus on methods*: Subject matter content and/or teaching methods employed.
Active Learning: Engagement in interactive activities that apply to instructional practice (e.g., observations, interactive feedback, discussion).	*Active Learning Opportunities*: Activities including observation, planning, practicing, and presenting.
Duration: Length and time span of an activity, as well as contact.	*Duration*: Number of hours, weeks, or months of training.
Collective Participation: Participation on grade level, department, building, or school district teams.	*Collective Participation*: Peer collaboration focused on instructional practices.
Coherence: Connection and continuity between existing or previous knowledge and new knowledge or teacher learning.	*Format*: Activities integrated into daily instructional practice.
(No proposed feature)	*Alignment*: Alignment of PD with standards, other initiatives, professional goals of teachers, and assessments.

It is not easy to define what qualifies as teacher professional development and what does not. Experiences ranging from classroom instructional practice and discussions with colleagues within a school building, to formal workshops and conferences, are all considered teacher professional development (Desimone, 2009; Yoon, Duncan, Lee, Scarloss, & Shapely, 2007). Nevertheless, Sparks (2000) noted that "a long history of low-quality staff development experiences has left most teachers with little faith that it will actually help them improve student learning" (p. ix). To this end, any claims by teacher professional development providers must be supported by more than provider self-aggrandizement survey data. The use of empirically-based evidence is a more reliable method to determine elements of effective professional development (Desimone, 2009).

According to Desimone (2009) there are two contrasting means for collecting and assessing information pertaining to quality teacher professional development. The first is to design and implement a mechanism that examines the vast array of experiences encountered by teachers in the professional development process; for example, activities that actually improve teacher knowledge and translate into classroom practice. The second means is to determine, beforehand, the particular learning outcomes a researcher wishes to collect regarding teachers. These might include the usefulness of a workshop, the effectiveness of collaboration, or the efficiency of technology. As such, Desimone (2009) recommended that designers and providers of professional development "focus on the critical features of teachers' learning experiences rather than on their structure" (p. 183).

Improving instructional practice to benefit students, or simply put in the literature, *teacher change,* is what teacher professional development aims to accomplish. Therefore, determining appropriate experiences likely to benefit teachers is more important than the use of a predetermined structure for delivery, based on proven claims. More so, teacher change can only be observed by ascertaining what is different in teachers with regard to their knowledge, skills, and attitudes about their instructional practice (planning, delivery, and assessment) resulting from professional development participation (Guskey, 2002). It can therefore be deduced that it is teacher change which will also ultimately affect student change, or specifically, student performance.

As indicated earlier, teacher change may often occur only after teachers observe change or increased achievement in their students as a result of teacher professional development (Guskey, 2002). Nonetheless, initial teacher self-efficacy resulting from effective professional development is the precursor to classroom practice which will subsequently lead to improved student performance. Therefore, Desimone's (2009) recommendations are at least one, practical solution. The new CCSS have simplified the debate on professional development by offering a comprehensive set of national standards that should be the focus for attainment.

IDAHO TOTAL INSTRUCTIONAL ALIGNMENT

Conclusively then, effective teacher professional development must first be focused on teacher needs, followed by determining the means with which to accomplish them (Guskey, 2002; Desimone, 2009). Only then will the opportunity exist to change teachers (knowledge, attitudes and beliefs), change instructional practice, and ultimately, change and improve student learning. To this end, the six previously referenced features deemed to be critical in the design of teacher professional development (i.e., focus on content taught and methods used; opportunities for active learning; duration of training; collective participation; coherence or format; and alignment) have been compared below with the Idaho TIA professional development model. These features are inherent to the model and stand as justification for its success in supporting teachers with the implementation of the CCSS.

Idaho TIA responded to the CCSS with a design including the six key features of effective professional development (see Table 2). The *context focus* of Idaho TIA rests on helping teachers make sense of the CCSS, to unpack or deconstruct them, and to identify the "teachable components" within each. Idaho TIA refers to this process as "task analysis." This content focus is foundational to Idaho TIA. It is the baseline for all collective efforts inherent in the project.

Coherence is designed in Idaho TIA as evidenced by a "crosswalk" of each CCSS with the existing state standards. The CCSS and the state standards are merged to identify three unique pieces: state standards that will disappear after the initiation of the national CCSS assessment; CCSS and state standards that match or are similar; and CCSS standards that are unique and include new expectations beyond the current state standards. The coherence provided by the crosswalk process helps teachers connect current expectations and instructional practice with new expectations and the subsequent adjustments necessary in their teaching. This continuity is essential as educators adapt to the required changes of a new initiative. Cross-walking is also a critical endeavor as the first assessment for the CCSS will not occur until 2014/2015 and until then classroom instruction must support the current state assessment.

The processes of "unpacking" the CCSS and of "cross-walking" with current state standards were designed using *active learning* and *collective participation.* Teachers are organized into multi-district, grade level, and content teams to maximize both collaboration and rich variance in perception, experience, and worldview. This design exponentially increases both process and product quality. Each team is supported with hardware and software technology; therefore, the work is efficient, continuous, and "living." This technology-supported team design has allowed the Idaho TIA professional development model to surface as one unique in the region, even in the nation. Active learning and collaboration are also embedded in the "alignment" of the CCSS which occurs within each grade level (horizontal alignment) and between grade levels (vertical alignment).

Duration, a frequently overlooked feature of effective professional development, was strategically considered in the design of Idaho TIA. A week-long, working conference has been created as a necessary feature for Idaho TIA in order to efficiently conduct the bulk of the work that is inherent to the process. The grade level/content documents resulting from this conference go through a comprehensive editing process by project staff. The documents are then made available on an electronic portal at the Idaho State University College of Education website. This process allows the documents to "live" and to evolve as edits, changes, and additions are proposed throughout the year.

An additional *duration* feature designed in Idaho TIA is a professional development event at the beginning of each year to evaluate the process and the outcomes of the previous year. A mid-year professional development event has also designed to train both new members and districts that join the project, as well as leaders/facilitators to assist with teams throughout the year. The built-in duration features of Idaho TIA lend to its concurrent "sustained implementation," which helps bridge the "knowing-doing gap" (National Staff Development Council, 2012) and increase the likelihood of improved practice.

Finally, *alignment* (NCES, 2005) is an innate, as well as a conscious, feature of Idaho TIA and perhaps the most powerful feature of this professional development design. As previously noted by Agamba and Jenkins (2012, in press), "The CCSS espouses the same or similar goals as the "No Child Left Behind Act" (NCLB, 2001): ensuring the readiness of students in the US for college and the workplace; producing students who are capable of competing in a global economy; and closing the gap between minority and non-minority students" (p. 1).

As a result of the challenges prescribed by NCLB (2001), Idaho TIA began in 2008 with alignment of the Idaho state standards. In 2010, Idaho TIA began the crosswalk and subsequent alignment of the CCSS. In 2012, all content areas (ELA, Mathematics, Social Studies, Science, Arts and Humanities, Physical Education/Health and Professional Technical Education) engaged in the alignment process. This alignment, conducted by grade level/content teams, is a continuous process beginning with task analysis and cross-walking of the standards, and ending with development and synthesis of formative and summative sample assessments. Additionally, the *alignment* feature of the Idaho TIA framework is adaptable and can be utilized to manage any new educational initiative as it comes forward; herein lies its power and sustainability across time.

Table 2: Elements of Idaho TIA Teacher Professional Development (PD) Model Compared to Recommended
PD Elements.

The following table contains the six research-based features identified in the literature as crucial in the design and evaluation of teacher professional development. The third column illustrates how the Idaho TIA model accurately reflects these research-based features.

Hawley & Valli, 1999; Kennedy, 1998; Wilson & Berne, 1999 (as quoted in Desimone, 2009).	NCES (2005).	Idaho TIA.
Content Focus: What teachers learn that can improve instructional practice and increase student achievement.	*Focus on content and focus on methods*: Subject matter content and/or teaching methods employed.	*Content Focus-Driven (CCSS)*: Teachers "unpack" and "align" the CCSS based on lesson planning, classroom instruction, and assessment methods.
Active Learning: Engagement in interactive activities that apply to instructional practice (e.g., observations, interactive feedback, discussion).	*Active Learning Opportunities*: Activities including observation, planning, practicing, and presenting.	*Active Learning*: Teachers engage in team-based, technology-supported learning that will apply to instructional practice (as opposed to "sit-and-get" instruction).
Hawley & Valli, 1999; Kennedy, 1998; Wilson & Berne, 1999 (as quoted in Desimone, 2009).	**NCES (2005).**	**Idaho TIA.**
Duration: Length and time span of an activity, as well as contact.	*Duration*: Number of hours, weeks, or months of training.	*Duration*: Conference duration is week-long (five days of at least 35 hours) and training events occur year-round. The process and the documents are "living" (continuously reviewed and modified)
Collective Participation: Participation on grade level, department, building, or school district teams.	*Collective Participation*: Peer collaboration focused on instructional practices.	*Collective Participation*: Teachers are from multiple districts and interact both in content and grade level teams occurring within rich and varied collaborative perspectives.
Coherence: Connection and continuity between existing or previous knowledge and new knowledge or teacher learning.	*Format:* Activities integrated into daily instructional practice.	*Coherence* and *Format:* Teachers' "crosswalk" the CCSS with state standards to identify obsolete, matching, and new content.
(No proposed feature)	*Alignment*: Alignment of PD with standards, other initiatives, professional goals of teachers, and assessments.	*Alignment:* Teachers utilize a framework to which new initiatives can continuously be incorporated, managed, and embedded. This system envisions a PK-16 seamless process.

CONCLUSIONS

Teacher professional development programs aim to improve student learning. With the release of the rigorous and compressed CCSS, and their adoption by 46 states, the time is now

for effective professional development. The stakes are high. To ensure an increase in student achievement several key issues must be addressed. First of all, the professional development must be well-designed with the *initial* goal of increasing the likelihood that teachers will be motivated to change. The necessary *teacher change* desired is in teacher knowledge, as well as attitudes and/or beliefs. This teacher change must in turn change instructional practice. Conclusively then, the factors of professional development, teacher change and instructional practice are interlinked, and the combination is the engine behind student achievement.

The Idaho TIA model is effective because it is based on these key principles. As a precursor to teacher change, Idaho TIA is focused first on teacher needs, followed by determining the means with which to accomplish those needs as espoused by Guskey (2002) and Desimone (2009). Furthermore, the Idaho TIA model encompasses the six key features of effective professional development (e.g., focus on content taught and methods used; opportunities for active learning; duration of training; collective participation; coherence or format; and alignment).

Idaho TIA operates within a framework that is based on immersion practice; teachers collaboratively explore the CCSS and take ownership of their own professional development as they *unpack*, *crosswalk*, and *align* the standards both vertically and horizontally. Such a collaborative process instills a belief in teachers that they can teach to the CCSS and produce the desirable learning outcomes. Notably, Idaho TIA gives teachers the facility to construct sample assessments for the CCSS with which student testing can begin, as the results of the Smarter Balanced Consortium are anticipated.

Analysis of teacher perception and attitude data collected in June 2011 from 480 participants indicated that the majority of teacher concerns regarding the CCSS were alleviated by Idaho TIA (Agamba & Jenkins, 2012, in press). A review of the Idaho TIA process in an effort to enhance its delivery and provide insight for improvement led to the exploration and evaluation of teacher professional development models as discussed herein. It is clear that the design of Idaho TIA indeed includes the critical elements of effective teacher professional development.

Idaho TIA is answering the call to assist schools and teachers to implement the CCSS and to prepare students to be college and career ready. Idaho TIA is the missing link in the CCSS initiative. This professional development model is facilitating K-12 standards-based instructional practice and PK-16 seamless education. Idaho State University is leading Colleges of Education across the state to form collaborative, university-school district partnerships through the Idaho TIA project. And as always the ultimate goal remains, "increased student achievement."

REFERENCES

Agamba, J. & Jenkins, S. (2012). Idaho Total Instructional Alignment: The Common Core State Standards and Teacher Professional Development. In P. Resta (Ed.), Proceedings of Society for Information Technology & Teacher Education International Conference 2012 (pp. 4800-4807). Chesapeake, VA: AACE.

Center on Education Policy (CEP). (2012). Year two of implementing the Common Core State Standards: States' Progress and Challenges. Retrieved from: http://www.cep-dc.org/

Center on Education Policy (CEP). (2011). Retrieved from: http://www.cep-dc.org/

Common Core State Standards Initiative. (2011). http://www.corestandardsorg/the-standards/

Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualization and measures. *Educational Researcher, 38*(3), 181-199.

DuFour, R. (2004). What is a professional learning community? *Educational Leadership, 64*(8), 6-11.

Education Week. (2011). Professional development. Accessed from: http://www.edweekorg/ew/issues/professional-development/

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: theory and practice, 8*(3/4), Taylor & Francis Group.

Guskey, T. R. (2000). *Evaluating professional development.* Thousand Oaks, CA: Corwin Press.

Haycock, K. (2012). Why is K-16 collaboration essential to educational equity? Accessed from: Higher Education.org: http://www.highereducationorg/reports/

Hirsh, S. (2012). Common-core work must include teacher development: Standards movement must embrace teacher professional learning. *Education Week, 31*(19), 22-24.

Hunt, Jr., J. B. (2009). Standards-based reform 20 (Forward). Professional learning in the learning profession: A status report on teacher development in the United States and abroad, National Staff Development Council.

Kennedy, M. (1998). Form and substance in teacher inservice education, *Research Monograph No. 13* (Madison, WI, National Institute for Science Education, University of Wisconsin-Madison).

Maldonado, L, & Victoreen, J. (Ed.). (2002). Effective professional development: Findings from research College Entrance Board. Accessed from: http://apcentralcollegeboardcom/

Myran, S., Crum, K. S., & Clayton, J. (2010). Four pillars of effective university-school district partnerships: Implications for educational planning. *Educational Planning, 19*(2), 46-60.

National Center for Educational Statistics (NCES). (2005). Issue Brief: Characteristics of Public School Teachers' Professional Development Activities: 1999–2000.

No Child Left Behind Act (2001).

Phillips, B. C. & Vandal, B. (2011). Standards: A critical need for K-16 collaboration. *Education Week, 31*(10), 20-21.

Scotchmer, M., McGrath, D. J., & Coder, E. (2005). Issue Brief: Characteristics of Public School Teachers' Professional Development Activities: 1999–2000 Education Statistics Services Institute (ESSI). Retrieved from: http://www.edpubs.org/

Sparks, D. (2000). Forward (p. ix-xiv). In Guskey, T. R. *Evaluating professional development.* Thousand Oaks, CA: Corwin Press.

Wayne, A.J., Yoon, K.S., Cronen, S., & Garet, M.S. (2008). Experimenting with teacher professional development: Motives and methods. *Educational Researcher, 37*(8), 469-479.

Yoon, K. S., Duncan, T., Lee, S. W.-Y, & Shapely, K. L. (March, 2008). *The effects of teachers' professional development on student achievement: Findings from a systematic review of evidence.* Paper presented at the annual meeting of the American Education Research Association, New York, NY.

Yoon, K. S., Duncan, T., Lee, S. W.-Y, Scarloss, B., & Shapely, K. L. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007-No. 033). Washington, D.C: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.

RESIDUAL EFFECTS OF A PROFESSIONAL DEVELOPMENT PROJECT FOR ASPIRING SCHOOL LEADERS

Pat J. Casey, University of Texas at Arlington
Teresa M. Starrett, Texas Woman's University
Karen Dunlap, Texas Woman's University

ABSTRACT

This study examines residual effects of a project wherein aspiring principals planned and presented professional development sessions for pre-service teachers. Using an online survey with both closed and open ended questions, former graduate students described (1) the experience and (2) how knowledge and skills acquired transferred from the field experience to their current positions. Immediately upon project completion, participating graduate students expressed (1) concern with organizational factors (2) usefulness of content information in their daily work, (3) value of repeating presentations, and (4) increased confidence in working with adult learners. Later responses from participants focused more on collaboration and teamwork, the value of learning how to plan and prepare professional development and the importance of developing a personal knowledge base. These data suggest that field experiences and practice embedded in authentic situations hold potential for long lasting effects that may help better prepare aspiring administrators for responsibilities they will encounter.

INTRODUCTION

This follow-up study with former graduate students explores residual effects of a field-based experience they participated in at one point during the past five years. There were two foci for this study. First, we looked at how former graduate students described what they learned from the experience. Second, we explored how former graduate students transferred the knowledge and skills acquired from the field experience to their current positions.

Clearly, improving the skills of people who work in schools is essential to the process of school improvement (Dufour, 1991). Because the leader's impact on student achievement is second to that of the classroom teacher, much of the principal's influence hinges on the ability to build the capacity of teachers through, for example, high quality, focused professional development (PD) (Leithwood, Patton, & Jantzi, 2010). Accordingly, fostering and sustaining high performance levels in schools hinges on high quality professional development that improves teacher practice and, subsequently, student learning (Joyce & Showers, 2002; Borko,

2004).   Other authors have investigated how principals use PD to foster teacher learning and, even more significantly, to create positive outcomes for students (Dufour, 1991; Grigsby, Schumacher, Decman & Simieou, 2010; Robinson & Timperley, 2007; Youngs & King, 2002).

Professional development is a means to build capacity in schools as a way of improving student learning (Youngs & King, 2002). Further, authors affirm that PD is most meaningful when it is job embedded and connected to the daily work of participants (Zepeda, 2008; Corcoran, 1995; Garet, Porter, Desimone, Birman & Yoon, 2001). Planning, monitoring and evaluating performance are critical functions of leadership (Lunenburg, 2010). Providing PD for staff integrates leadership functions and provides an opportunity for reflection on one's own professional practice (McDonnell, 2011). Thus, developing teachers' effectiveness is undoubtedly one of the most important functions of a principal (Whitaker, 2003).

While teacher PD may come from a variety of sources (Dufour, 1991), the most effective professional development of this type is typically of the school-based variety (DiPaola & Hoy, 2008). For decades, authors have (1) explored the various ways leadership positively influences educational outcomes for students (Hallinger, 2011; Hallinger & Heck, 1998; Hallinger & Murphy, 1987) and (2) focused on *how* leaders impact student learning (Leithwood, Seashore-Louis, & Wahlstrom, 2004; Hallinger, 2011; Printy, 2008; Robinson, Lloyd, & Rowe, 2008).

Given that positive student outcomes hinge on a teacher's capacity to provide quality instruction, leaders must be able to design professional development for teachers that is focused, meaningful, and engaging. Preparation programs for school leaders, therefore, are compelled to include experiences that enable aspiring principals to successfully plan and implement professional development that has the potential to improve and enhance skills teachers need to provide effective instruction.

Moreover, authors have encouraged preparation programs to employ projects or field-based experiences that both incorporate and encourage the development of fundamental skills and deepen the understanding of knowledge and professional dispositions (Orr, 2006). Such field experiences can take the form of problem-based learning activities, professional learning communities or case studies. Additionally, principal preparation programs have traditionally included internship requirements and field experiences (Orr, 2006). Davis, Hammond, LaPoint & Myerson (2005) investigated the effects of field based experiences in leadership preparation, but little is known about whether the effects persist or positively impact a leader's development. This paper examines the extent to which former master's level students perceived the knowledge gained from a field- based experience during their educational leadership preparation program transferred to their current positions in the field.

BACKGROUND INFORMATION

The participants in this study engaged in a project during their graduate program wherein they designed and developed PD sessions for aspiring teachers. In collaborative groups with

other aspiring administrators, they chose topics and organized the training sessions using the Interstate New Teacher Assessment and Support Consortium (InTASC) standards for new teachers. The participating graduate students were all experienced Texas teachers seeking principal certification. The purpose of this project was to promote the professional learning of the aspiring administrators – to give them an opportunity to practice planning and presenting a staff development session in a manner similar to that which would be expected of them as practicing campus administrators.

This study explores the participants' sustained impact perceptions of the PD experience on their development as leaders. Specifically, participant observations regarding the increased confidence levels and professional role identities were examined. Thus, this study contributes to a dialogue about effective leadership preparation and development practices by examining the sustained effectiveness of the project.

METHODS

The purpose of this study was to explore the lasting effects of a graduate program project for aspiring school leaders within a principal preparation program. There were two foci for this study. First, we looked at how former graduate students described what they learned from the experience. Second, we explored how former graduate students used the knowledge and skills they learned from the experience in their current positions.

The target population for the present study was former graduate students. The students had been enrolled in a master's level educational leadership program with an emphasis on principal certification during the last five years at a middle-sized public university in Texas. During their time in the master's program, they participated in a PD project. Immediately following the PD project experience (in the fall or spring semesters of 2007-2010), participants were invited to participate in an online survey which is used herein as the first source of data. The former graduate students were asked to participate in a follow-up online survey in the fall of 2011 and 37 former students responded forming a second source of data.

Both the original survey (immediately following the PD experience) and the current survey were anonymous and online. The surveys solicited responses to three types of questions. Participants were asked to (a) provide basic, demographic information including gender, ethnicity and current position, (b) respond to 19 rating scale items regarding their experience with the PD project and (c) reply to five open ended questions describing their perceptions of the experience in more depth. No names or other identifying information were collected with either survey.

The website containing the study survey, www.psychdata.com, was housed on a secure server accessed only by the researchers through a protected user name and password and utilizing Secure Socket Layer (SSL) 256-bit encryption technology to further protect data. The responses to the closed ended questions were entered into a file for data analysis using the

Statistical Package for the Social Sciences (SPSS), Version 15 software program. Data from the closed ended survey items are presented as descriptive statistics. Responses to the open ended questions were coded for common themes to give a sense of the participants' perceptions of the immediate or lasting effects of the PD experience. This phase of the analysis focused on each participant's individual responses and what they identified as significant experiences. We compared the findings from the current survey to the findings from earlier surveys (existing data) and looked for places where the data intersected among all participants and items (Wolcott, 2009). This compilation of responses illuminated the residual effects of the field-based PD experience.

The first source of data - earlier survey(s)

As the first source of data, survey responses from 80 former graduate students (2007-2010) were reviewed. These data eliciting perceptions of the experience were collected from the aspiring administrators immediately following delivery of the PD session via an online survey. The responses were overwhelmingly positive.

Participants from the 80 earlier surveys were 12 (15%) males and 68 (85%) females. Their (self-reported) ethnicity was 53 White (66%), 13 African American (16%), and 3 Hispanic (2%). All were classroom teachers seeking a master's degree with principal certification.

In addition to the presenters' immediate satisfaction with their experiences, four main themes emerged from the 80 responses. First, the aspiring administrators referred regularly to organizational/structural factors such as time, and the size/makeup of their groups and activities. They believed more time was needed to adequately present information as repeated comments requesting more time to present surfaced in the data. Additionally, facilities and equipment were areas of concern for respondents.

Secondly, many participants said presenting the same topic session more than once gave them an opportunity to practice with different audiences and refine their presentation skills. Each time they presented the same topic session to a new audience, they believed improvement occurred. Using something of a trial and error process, they reported adapting instruction to better meet the needs of adult learners with the second or third presentation and reported improvement.

Third, the aspiring administrators referred to the content of the sessions saying that the information was valuable to them in their work as teachers. They learned new strategies and techniques that they anticipated using in their classrooms. Some said they wished they had been able to participate in this type of experience before they began teaching.

Finally, many of the respondents reported that this was their first experience presenting to adults. As a result of their participation in the project, these respondents said that they would feel more comfortable addressing, for example, other teachers in faculty meetings or presenting in-service training for other teachers in the future.

The second source of data - present surveys

In the present study, the 37 former graduate students who had presented a PD session participated in the anonymous, online survey. The invitational email contained the purpose of the study and a link to the online survey at psychdata.com. Participation was voluntary and all data was self-reported.

Of the 37 former students who responded, 30 (81%) were female and 7 (19%) were male. Of the female participants, 13 were still classroom teachers; eight had moved into campus administration (principal or assistant principal); another eight were not classroom teachers but, rather, served in a variety of different leadership positions that we categorized as teacher leaders for purposes of data analysis. One did not respond to the question. Of the male participants, 5 were still classroom teachers and 2 had moved into campus administration positions.

Participants were White (24/67%), African American (5/13.9%), and Hispanic (6/16.7%) with one not responding to the question about ethnicity. Five of the 24 (21%) White participants had become campus administrators, five (21%) were teacher leaders and 13 (57%) were still classroom teachers. Three of the 5 (60%) African American participants had become campus administrators, 1 (20%) was a teacher leader and 1 (20%) was a classroom teacher. One of the 6 (17%) Hispanic participants had become a campus administrator, 2 (33%) were teacher leaders and 3 (50%) were classroom teachers.

FINDINGS

Observations from the responses to the rating scale items are represented in this section. In the analysis, data from some of the items were collapsed. We were interested to see if there were differences in the responses from three groups: a) the former graduate students who were still teachers, b) the former graduate students who were teacher leaders or instructional leaders on their campuses and c) the former graduate students who had moved into administrative positions as principals or assistant principals.

The former graduate students reported still using the skills they acquired from the experience in two ways. First, many of the respondents reported they have employed the skills in planning and presenting other training sessions to colleagues in the workplace. Some reported that they have often 'thought about' or reflected upon the experience, appreciating its value in their development because it was "authentic" or "real life." Interestingly, many also reported that they have used their acquired knowledge and understanding of PD skills to judge other presenters in staff development sessions they have attended.

Prior experience with adult learners

From the total number of participants inclusive of all three categories, 80% indicated the professional development presentation was NOT the first time they had presented material to adult learners. This finding was not surprising as teachers, teacher leaders, and campus administrators have multiple opportunities in which to share their expertise; either on a formal or informal basis.

Presentation of content

Also not unexpected was the finding that indicated when the former graduate students were asked to share expertise with their colleagues, it was not necessarily focused on a topic related to the original PD project experience. For the graduate students who remained in a teaching position, 66.6% stated they had presented material similar to the PD topics to their colleagues. For teacher leaders and campus administrators, the similar topic presentation to colleague percentage was 75% and 70% respectively. However, all participant categories showed a dramatic rise when the question sought to find out if participants had presented topics *unrelated* to the PD experience. Specifically, 77% of teacher respondents, 100% of teacher leader respondents and 90% of practicing campus administrator respondents indicated they had presented other topics or content to their peers. In each situation, participants who continued to hold teaching positions presented targeted information less frequently to their colleagues than did their more administrative leaning counterparts.

Confidence

One goal of the PD project was to enhance the presenters' confidence in their ability to deliver PD effectively. Of the participating graduate students in educational leadership who went on to become teacher leaders, 87% indicated the experience did increase their comfort level in this area. This was lower than either the participating teachers (94%) or the campus administrators (90%). This seemed ironic as stereotypically a majority of teacher leaders' responsibilities revolve around the competent delivery of content specific professional development.

For the most part, PD targets the needs of teachers, frequently those of beginning teachers. When asked if as a result of the PD graduate level experience, they felt good about working with new teachers, 99% of teacher respondents and 100% of campus administrators agreed with the statement. Of the students who went on to become teacher leaders, only 87% agreed with the statement. This finding may be attributable to the fact that teacher leaders are not necessarily assigned to a campus where daily interactions with teachers of all expertise levels are

the norm. Or, perhaps, teacher leaders are expected to deal more with specific content areas, and the teachers they work with are typically the more experienced ones.

Leadership Skills

Finally, another goal of the project was to help graduate students heighten their leadership skills and abilities. Participating graduate students in educational leadership who went on to become teacher leaders (87%) agreed the experience did just that. However, the response percentage was lower than that recorded by either the teacher (99%) or campus administrator participants (90%). This seemed somewhat puzzling as teacher leaders are stereotypically leaders in their field of study. Additionally, when listening to other speakers, 100% of the teacher leaders indicated they had ideas as to how the speaker could do a better job of presenting the material.

Themes from the responses to open ended questions

The data suggest that the former students are still using the knowledge and skills they acquired. Open ended questions were added to investigate participants' thoughts about what they learned from participating in the PD project and how they continued to use what they learned in their current professional positions. The responses to the open ended questions were analyzed for commonalities. Four themes emerged from the data: (1) learning to collaborate with peers, (2) working with adult learners, (3) planning and preparing staff development, and (4) developing a knowledge base.

Learning to collaborate with peers

When asked what they learned and what they have used most, participants reported that the most meaningful learning was embedded in their work with the group with whom they planned and presented the training session. Interestingly, when asked to describe "what you did in planning and presenting the professional development session that you have used since," more than half of the participants responded with "we" statements. The words collaboration, cooperation, team, group, and together were used frequently.

Participants repeatedly referred to what they learned from the challenges associated with collaboration. For example, one said,

> "With the presentation, there were a couple of pieces we did not all agree on. The experience helped me to "let go" of some of my own ideas and see the bigger picture of the experience in working with other beliefs and opinions. I think the experience helped to make me a better listener to others and to see that not everyone thinks like I do."

Another participant reported, "One of the hardest skills we had to plan and practice was a team presentation. Knowing when to pause to give a teammate the chance to talk to clarify was a challenge." And one said that the aspiring teachers "wanted more hands-on material…" that was lacking in the part presented by a team member. The participant said, "I knew that would be the case with one of my co-presenters and didn't do anything to guide her in a different direction. I should have been more vocal."

The responses overall describe what participants learned from the experience of working with a team. One summed it up saying, "I am not the only one who knows ...the answers to all questions, other individuals can have great ideas!!! They bring a wealth of knowledge and experience to the table and even a beginning teacher can share a valuable lesson."

Working with adult learners

The second most prominent theme in the participants' responses about what they learned and how they were using their new understanding focused on an improved understanding of adult learners. For example, one said the aspiring teachers "wanted more hands-on material that was easy to use in the classroom – practical and helpful." Others reiterated this connection saying, for example, by bringing their own experience to bear on the PD session. One said, "I remember what it was like to be an overwhelmed new teacher and sitting in 'useless' PD sessions. I wanted to provide useful information and tips the new teachers would be able to implement immediately." And another said that his/her own experiences "made me work harder to make my presentations more practical and applicable."

Other participants saw the adult learners as different from the students they were used to working with in many ways. One said, "Adults are more demanding and as easily distracted as children." Others said the audience was "sometimes difficult to get motivated" and "reluctant to think out-of-the-box." There was a clear understanding that that a traditional lecture model of training would not work. One participant said, "Absolutely, no sit and get!"

Still others referred to the need to provide the audience with "time for reflection." Several respondents referred to the need to be well versed in one's content. Participants' concerns about being "knowledgeable about the content presented" were reflected in comments such as, "The biggest thing I learned was that I needed to know my information/topic completely." Another noted, "I needed to be able to adequately answer any questions/comments that were brought up." They found the, "Adult learners also need differentiated instruction." In some cases, participants were somewhat surprised that what they considered to be every day, common knowledge, was new and different for the audience. An additional participant stated, "it was interesting to hear the feedback and learn that not many of them had heard much about differentiation." Others verbalized thoughts such as, "you have to make sure your material is clear and understandable for the teachers" and that presenters learned "not to expect new teachers to know the lingo" or acronyms.

Moreover, the participants articulated the need to address the adult audience respectfully. One participant specifically said that s/he learned not to "talk down to adult learners." Highlighting the difference between their experience working with students in the classroom and the new experience working with adults, one said, "adults are not the best audience and how you talk to them is very different from children." Another cautioned that any feedback to attendees "had to be presented in a way that is non-threatening."

Planning and preparing staff development

Some participants stressed the importance of administrative details such as having enough materials and handouts, being "punctual" and adapting the pace of the lesson for the audience. Such planning and preparation details–were considered extremely important when working with an adult audience.

Participants said they learned from the project that, "The planning and preparation is much more difficult than it looks." "It takes an enormous amount of work to prepare a presentation that is entertaining, invigorating and engaging." "The educational part is easy – the rest is the challenge." "It is hard work."

Many of the participants recalled that they had been "surprised by the amount of work that goes into preparation" and acknowledged learning that "preparation is vital to a successful presentation." Participants reported a lasting understanding of "the effort and hours it took to plan and present" high quality, meaningful PD. It took "many hours of planning and preparing to get ready for the [one hour] session."

Developing a knowledge base

Many of the participants acknowledged that they had used the strategies developed for their presentations and/or the information or materials used in the training sessions. The training sessions were all developed around InTASC standards for new teachers. The presenters found the information useful and had since used it in working with novice teachers and other colleagues on their campuses.

For example, one participant said, "I think the professional development session I participated in made me a much better presenter. Also, during my preparation for the presentation, I became VERY knowledgeable about the topic myself!" Another said, "I have presented to adults many times since this presentation and feel comfortable engaging adult learners during professional development." Third, one participant reported,

"Even though I have had years of experience in professional development,
I really looked forward to using valuable information that I learned in class -- and
practicing immediately with these new concepts. It was practical application of

new information, and I love that. Remember the saying, 'Teach it once, learn it twice.' That really applies here. Most importantly, even though it was over a year ago that I participated in this, I remember it so well -- So my learning was truly deepened."

DISCUSSION

Overall, the findings from both the current students and those who have since graduated have been positive. The impact of providing professional development opportunities for students who are aspiring administrators appears to have both a positive impact and long lasting effect on their careers and the careers of personnel around them. This is most important when one takes into consideration that graduates from principal preparation programs will be responsible for professional development offerings on his or her campus for many years to come.

Accordingly, the surveys that the aspiring administrators completed immediately following the PD activity were positive. Most salient themes in the immediate responses were the students' interest in organizational factors such as time for presentation, facilities and audio visual equipment available, the usefulness of the content information for their current work assignment (i.e., in the classroom), the value of repeating the presentation (offering the same presentation more than one time), and increased confidence in working with adult learners. While the later responses were also overwhelmingly positive, the students' focused heavily on the value of learning how to plan and prepare PD and developing a personal knowledge base not just about the topic of the presentation but also about skills that facilitate adult learning.

The data suggest some differences in the survey responses as answered (1) immediately after presentation of a PD seminar as a graduate student and (2) residually a year or more after participation in the PD experience. The most significant new theme that emerged from the later responses was the participants' recognition of what they learned about themselves and about teamwork. The ups and downs of planning and presenting with the team of peers provoked meaningful reflection. Several of the participants attributed personal learning or growth to what happened in the planning stages or during the actual presentations. This theme that emerged as a residual effect may be based on reflection that participants needed time to process.

In this study, graduate students reported positive residual effectives from a professional development project embedded in their graduate program. These data suggest that field experiences and practice that is embedded in authentic situations hold potential for long lasting effects that may help better prepare aspiring administrators for responsibilities. This is consistent with Orr's argument for what field experience should be (Orr, 2006). The more real life experiences in which students can participate at any level, the better prepared the students will be. They reported positive impacts both immediately and years later. The interesting difference is that their perceptions of these experiences changed over time.

For example, the immediate responses to the PD assignment experience centered on organizational factors, such as focusing on facility space and timing of the presentation. Participants also reported specifically the value of repeating the same presentation multiple times. In contrast, over time, the responses from graduates focused less on details and more upon planning and preparation of professional development on a whole. This finding is meaningful in that it shows a more global approach to the tasks for which many administrators are responsible. Immediately following the professional development activity, the attention was merely on tasks while years later the focus was clearly on the value of the project in terms of the personal and professional growth that resulted. Growth was perceived in areas like skills for working with a team/colleagues and, as a presenter, being responsive to the needs of an audience.

Other notable findings reported by the recent participants were the awareness of content information and increased confidence in working with adult learners. These content skills are more developed as reported by the graduates who discussed a knowledge base regarding their chosen topic. Additionally, these participants reported continuing their work with adult learners. One of the most significant differences with the two sets of respondents was that those who reported residual effects from the professional development seemed more reflective in their practice especially regarding collaboration with peers.

SIGNIFICANCE

The significance of this research is that, once students become familiar with, and comfortable with presenting to adults, the researchers believe they will present to their colleagues with greater frequency thus impacting and improving professional practice. The ability to provide high quality, ongoing PD for staff and faculty is one of the most important functions of a school leader. The opportunity to sharpen these skills early in his or her career is one that cannot be taken lightly. The power of an activity such as this provides professors with a reflective look at assignments and encourages more field-based experiences for graduate students in order to create authentic learning experiences.

As one graduate stated, "I believe the program and this class to be strong in giving me the opportunity to apply my skills to the outside world." Another noted, "This experience was helpful and worthwhile. I plan to use many of the learned from this experience at my campus when helping with professional development plans." Overwhelmingly, experience was reportedly a positive one. One respondent reported, "I have given small workshops within my district, but this was on a totally different level. I appreciate having the support and framework." These and other comments showed an elevated level of confidence when presenting to adults.

CONCLUSION

Professional development has to be relevant and aligned to the campus goals. It is not useful if it does not have a clear purpose. It is interesting that some participants said PD should target campus as well as individual teachers' needs. Meeting the needs of a group of people is difficult In order to do this, one must know the needs of the school as well as the teachers' strengths and weaknesses.

This study suggests there are some positive residual effects from the opportunity to provide PD in graduate programs. The results were consistent with the research in that the participants agreed that the chance to present allowed them to hone and clarify their skills both with pre-service teachers and later with their colleagues.

REFERENCES

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher, 33*(8), 3-15.

Corcoran, T. (1995). Helping teachers teach well: Transforming professional development. *Consortium for Policy Research in Education.*

Davis, S., Darling-Hammond, L., LaPoint, M., & Meyerson, D. (2005). *Developing successful principals.* Stanford Educational Leadership Institute: California.

DiPaola, M. F. & Hoy, W.K. (2008). *Principals improving instruction: Supervision, evaluation and professional development*. New York: Pearson Education Inc.

Dufour, R. P. (1991). The **principal** as staff developer. Bloomington, IN: National Educational Service.

Garet, M.S.; Porter, A.C.; Desimone, L.; Birman, B.F.; & Yoon, K.S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*. (38)4. Pp. 915-945.

Glatthorn, A. A., & Fox, L. E. (1996). Quality teaching through professional development. Thousand Oaks, CA: Corwin.

Gordon, S. (2004). *Professional development for school improvement.* Boston, MA: Allyn & Bacon.

Grisby, B., Schumacher, G., Decman, J. & Simieou, F. (2010). A principal's dilemma: Instructional leader or manager. *Academic Leadership Live: The Online Journal. 8*(3). Retrieved from: http://www.academicleadership.org/article/ A_Principal_s_Dilemma_Instructional_Leader_or_Manager

Hallinger, P. (2011). Leadership for learning: Lessons from 40 years of empirical research. *Journal of Educational Administration. 49*(2). 125-142.

Hallinger, P., & Heck, R.H. (1998). Exploring the principal's contribution to school effectiveness 1980-1995. *School Effectiveness and School Improvement, 9*(2), 157-191.

Hallinger, P. & Murphy, J. F. (1987, September). Assessing and developing principal instructional leadership. *Educational Leadership. 45* (1). 54-61.

Interstate New Teacher Assessment and Support Consortium [INTASC]. (1992). Model Standards for Beginning Teacher Licensing and Development. Washington, DC: Council of Chief State School Officers.

Joyce, B.R. & Showers, J. (2002). *Student achievement through professional development.* Alexandria, VA: Association for Supervision and Curriculum Development.

Leithwood, K., Patten, S. & Jantzi, D. (2010). Testing a conception of how school leadership influences student

learning. *Educational Administration Quarterly,* 46, 671-706. DOI: 10.1177/0013161X10377347

Leithwood, K. Seashore-Louis, K., Anderson, S. & Wahlstrom, K. (2004). *How leadership influences student learning*. New York, NY: Wallace Foundation.

Lunenburg, F. (2010). The principal and the school: What do principals do? *National Forum of Educational Administration and Supervision Journal*, v. 27 (4) pp. 1-13.

McDonnell, R. (2011). *Essentials of program planning and evaluation.* Sudbury, MA: Jones & Bartlett.

Printy, S.M. (2008, April). Leadership for teacher learning: A community of practice perspective. Educational Administration Quarterly. 44(2) 187-226. DOI: 10.1177/0013161X07312958

Robinson, V. M. J., Lloyd, C.A., & Rowe, K.J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly. 44,* (5) 635-674. DOI: 10.1177/0013161X08321509.

Robinson, V. M. J. & Timperley, H. (2007). The leadership of the improvement of teaching and learning: Lessons from initiatives with positive outcomes for students. *The Australian Journal of Education. 5,* (3) 247-262.

Whitaker, T. (2003). *What Great Principals do Differently: Fifteen things that matter most.* Larchmont, N.Y.: Eye on Education

Wolcott, H. F. (2009). *Writing up qualitative research* (3rd ed.)*.* Thousand Oaks: Sage.

Youngs, P. & King, M. B. (2002, December). Principal leadership for professional development to build school capacity. *Educational Administration Quarterly, 38*(5), 643-671.

Zepeda, S. J. (2008). *Professional development: What works.* Larchmont, NY: Eye on Education.

VIDEO AS A RECRUITMENT TOOL AT "BIG FOUR" PUBLIC ACCOUNTING FIRMS: WHY VIDEO SHOULD BE PART OF ACCOUNTING CURRICULA

Katherine Campbell, University of North Dakota
Mary Loyland, University of North Dakota

ABSTRACT

John Chambers, CEO of Cisco Systems Inc. recently stated, "Video is the new voice… If a picture is worth a thousand words, a multimedia video is worth a million words" (Jander, 2010). This assertion is consistent with the increasing use of video in the business world. Today businesses are using video for everything from video conferencing to public relations. This paper describes the ways the "Big Four" public accounting firms are currently using video as a recruitment tool. This evidence suggests that global public accounting firms are relying on video as an important medium for communicating with college students. Further, employees at all levels of public accounting firms are being called upon to communicate through videos. Thus, the ability to communicate using the video medium is a relevant skill for accounting majors. Expanding the communication experiences of students by incorporating the video medium requires minimal resources, but nevertheless there is scant evidence that video assignments are being used to any great extent in accounting courses. Our descriptive analysis of both the extent and nature of the video content used on Big Four firms' recruiting websites makes a compelling argument for incorporating student-produced videos into accounting curricula. Doing so requires little investment but has the potential to better prepare students for both initial interviews and performance at various levels in public accounting firms.

INTRODUCTION

The "Big Four" public accounting firms (Deloitte, Ernst & Young (E&Y), KPMG and PricewaterhouseCoopers (PwC)) are consistently ranked amongst the best employers for young professionals. *Bloomberg Businessweek's* 2009 list of the "Best Places to Launch a Career", for example, ranked the "Big Four' public accounting firms as the top four employers on its list. Each of these accounting firms was also ranked in the top sixteen firms included on *Bloomberg Businessweek's* list of the "Hottest Jobs in 2010". This ranking says a lot about the vitality of these accounting firms and also suggests that they have successfully built images and developed significant online presences that are attractive to young professionals (Di Meglio, 2010; Rose

2007). This is remarkable given that accounting was long regarded as a solid, if unexciting, profession dominated by "bean counters" (Baldvinsdottir, Burns, Nørreaklit & Scapens, 2009). Now, accounting firms are sharing space on the list of "hot" jobs with the firms like Apple, Google, Walt Disney, and the Peace Corp.

The Big Four public accounting firms clearly have incentives to invest in building images that are attractive to college students. These firms operate in a professional service industry where recruiting and retaining talent is critical to success. Each of these firms hires thousands of new college graduates every year (Gilmore, 2010), and thus each is constantly engaged in recruitment. Image or branding is very important in these recruiting efforts (Furness, 2008). PwC, for example, conducted a "Personal Brand Week 2.0" in 2011 and provided a variety of daily online content related to the idea of branding (PwC, www.pwc.com/ us/en/careers/pwctv/personal-brand-week.jhtml). While helping students to become more aware of their personal brand, the emphasis on branding makes it clear that PwC is quite aware of its own brand. Although the Big Four public accounting firms use a variety of methods of communicating with students and new college graduates, they are increasingly incorporating video as a recruitment tool. This is consistent with a focus on being innovative in trying to cultivate a youthful recruiting image and making use of a variety of online recruitment channels (Rose, 2007; Ruiz, 2007; Peacock 2008). Since the accounting profession has identified communication as a core competence (American Institute of Certified Public Accountants, 2006-2010), understanding the ways that accounting firms are using video as medium for communication is relevant to accounting faculty who are responsible for developing curricula designed to prepare students for careers in public accounting.

The balance of this paper is organized as follows: the next section provides a descriptive analysis of the use of video by Big Four public accounting firms on their U.S. campus recruiting web sites, the following section discusses implications of these findings with respect to the incorporation of video experiences in accounting curricula, and the final section provides concluding remarks.

USE OF VIDEO AS A RECRUITMENT TOOL ON BIG FOUR WEB SITES

The U.S. websites of Deloitte, E&Y, KPMG, PwC, collectively known as the "Big Four" public accounting firms, were reviewed in February 2011. Although their approaches to presenting video content varied to some degree, each of these firms includes video content on the web pages devoted to U.S. student/campus recruiting. PwC, for example, structures its web page based on "channels", even using the name "pwc.tv" (PwC, http://www.pwc.com/us/en/careers/pwctv/index.jhtml). While the PwC web pages accessible under the tabs careers/campus also contain text and other interactive features, it is quite clear that the entire structure of the pages is designed around the medium of video and these pages contain extensive video content.

Ernst & Young, a firm that has been recognized as a pioneer in online recruiting (Di Meglio, 2010), takes a different approach. Its web site provides an extensive amount of text and links to brochures under its careers/students tabs (Ernst & Young, http://www.ey.com/US/en/Careers), but it focuses attention on video content by using a separately named website. Visitors to the firm's career page are also invited to gain "real insight into what we are about" by clicking to access its "exciting website experience, "EY Insight" (Ernst &Young, http://www.ey.com/eyinsight/index.html). At the "EY Insight" page, a substantial amount of the content is video. This site has three major sections: "EY 360º", "Picture Yourself" and "Interview Insider" (Ernst & Young, http://www.ey.com/ eyinsight/index.html). While the "Picture Yourself" component is an interactive tool (Ernst & Young, http://www.ey.com/pictureyo urself/index.html), the remaining two sections are quite video-intensive. The "EY 360º" section includes "profiles" featuring employees discussing their professional lives at different times of the day over the course of a year and "snapshots" which feature video clips of employees discussing a particular dimension of their career with the firm (Ernst & Young, http://a59.g.akamai.net/f/59/46486/1m/ernstyoung.download.akamai.com/ 46486/EY360/index.html). The "Interview Insider" section includes a "video gallery" featuring videos of staff providing interview tips and advice. (Ernst & Young, http://www.ey.com/ interviewinsider/index.html).

KPMG's website incorporates video throughout its pages, but provides a media player where visitors can easily access video content in one location. The US Campus web page opens with a cycle of photos set up as a running slide show (KPMG, http://www.kpmgcampus.com/index.shtml) where the content underlying each slide includes video content. One tab is labeled "Media Center" and clicking this title opens a media player where videos in different categories can be selected and played. This dedicated location for accessing video content makes it easy for visitors to view multiple videos and even limit their visit to viewing video content. A link is also provided to videos available on the firm's YouTube channel (http://www.youtube.com/kpmggo).

Deloitte's careers/student website integrates text and video throughout the various levels and web pages (Deloitte, http://careers.deloitte.com/united-states/students/studentgrad.aspx). This approach is similar to KPMG's, as a link to a dedicated media player allows visitors to view a variety of videos at one location (Deloitte, http://careers.deloitte.com/united-states/students/medialibrary.aspx). Similarly, links to videos viewable via YouTube are available throughout the firm's careers web pages and links are provided to Deloitte's YouTube channel (Deloitte, http://www.youtube.com/user/YourFutureAtDeloitte).

Thus, although the four firms take different approaches to structuring their campus recruiting websites and integrating video content into these sites, each of the Big Four public accounting firms makes extensive use of video in recruiting students. Table 1 summarizes some the ways the Big Four public accounting firms provide video content on their U.S. campus recruiting websites.

Table 1: Use of Video and YouTube Links US Campus Recruiting Websites Big Four Public Accounting Firms				
	Deloitte	**Ernst & Young**	**KPMG**	**PwC**
Videos Included on Website	Ys	Ys	Ys	Ys
Separate Video-intensive Website	N/A	EYInsight	N/A	N/A (but use name PwC.tv)
Direct Link to YouTube	**Yes**	No	Yes	No
Name of Firm's YouTube Channel	YourFutureAtDeloitte	The Ernst & Young Channel (Ernst and Young Global)	KPMGGO	PwCUSCareers

A review of the videos included on U.S. campus recruiting websites found that the big four public accounting firms use a variety of types of video content.   Although there was some diversity in approaches, commonly used types of video content included messages from the CEO and/or leaders of the firm, profiles of employees at various stages of their careers, videos featuring student interns, footage of student programs and comments from the student participants, and tips on interviewing, dress or other dimensions of performance at the firm. While the overall web presentation varies, there is a lot of commonality in the elements of video content that the big four firms include on their U.S. campus recruiting websites.   Table 2 summarizes the use of four types of video content included on the campus recruiting websites of the Big Four public accounting firms.

Table 2: Types of Video Content US Campus Recruiting Websites Big Four Public Accounting Firms				
Content	**Deloitte**	**Ernst & Young**	**KPMG**	**PwC**
Profiles of Employees	Yes	Yes	Yes	Yes
Videos Featuring Student Interns	Yes	Yes	Yes	Yes
Messages from Chairman / Firm Leaders	Yes	No	Yes	Limited
Tips	No	Yes	Yes	Yes
Diversity	Yes	Yes	Yes	Yes
Global Opportunities	limited	Yes	Yes	Yes

Interestingly, a significant portion, if not the majority of the video content included on these recruiting sites features employees and/or student interns. All four firms place a heavy emphasis on video featuring employees at relatively early stages of their careers. While the most typical approach is to include various forms of profiles of individuals, the content featuring students/interns/employees takes a variety of forms.   Deloitte's website features an intern interviewing the firm's CEO in "The intern and the CEO" (http://careers.deloitte.com/united-states/students/medialibrary.aspx?mediaID=94).   KPMG includes links to intern-produced videos that have the feel of informal video journals (http://www.kpmgcampus.com/ kpmggo/gip_where_in_the_world.shtml). Finally, on some sites individual students/interns are

featured as part of a group. In "Deloitte in a word" (http://careers.deloitte.com/united-states/students/medialibrary.aspx?mediaID=64), student participants in the 2009 Deloitte National Leadership Conference are featured. In PwC's "Leadership Adventure" (http://www.pwc.com/us/en/careers/pwctv/channel-3-events.jhtml), student participants in the firm's 2009 Leadership Adventure program are featured.

Not only do the firms develop video content themselves, but they also promote the production of video content through a variety of mechanisms including sponsorships of video contests. At various times each of the Big Four firms has sponsored at least one student or employee video contest. Table 3 lists information about video contests that have been sponsored by the Big Four public accounting firms.

Table 3: Student/Employee Video Contests Sponsored by Big Four Public Accounting Firms			
Firm	Video Contest	Title	Participants/Dates
PwC	PwC's Elevator Pitch Video Contest	"Making an Impression in only 30 seconds"	Student Video contest (2/11-3/25/2011), videos will be posted on Facebook page.
Deloitte	Deloitte Film Festival	"What is Your Deloitte?"	Deloitte employees, 2007 (videos at https://webcasts.deloitte.com/deloitte_com/dffwinners/ or http://www.youtube.com/user/DeloitteFilmFest)
Ernst & Young	Reel Influence Campus Video Competition	"Why Professional Services?"	Students at 75 campuses 2007/2008 (winning videos at https://www.ey.com/us/reelinfluence)
KPMG	KPMG Intern Video Contest	"Through Their Eyes: Integrity at KPMG"	KPMG summer interns 2010(winning videos at www.kpmgcampus.com/whoweare/ethics.shtml)
	KPMG Canada National Student Video Contest	"What Makes a Top Employer?"	Students; 2010 (winning videos at http://www.youtube.com/kpmgfit#p/u/0/qw8joRCRMEU)

IMPLICATIONS OF BIG FOUR VIDEO USE FOR ACCOUNTING CURRICULA

The descriptive evidence regarding the use of video on U.S. recruiting websites by Big Four firms suggests that global public accounting firms are rely on video as a significant medium for communicating with college students. Further, interns and student participants in other programs sponsored by Big Four firms are prominently featured in videos used on the firms' websites. This makes it clear that employees at all levels of public accounting firms are being called upon to communicate through videos. The extensive use videos produced by and/or featuring students, interns, and employees at early career stages makes a compelling argument that the ability to communicate using the video medium is a relevant skill for accounting majors, particularly those planning to pursue careers at the Big Four public accounting firms.

For some time, the accounting profession has identified communication skills as critical for success in the profession. The American Institute of Certified Public Accountants, for example, developed a Core Competency Framework that defines a set of skills that are important

for students entering the accounting profession. Three sets of competencies are identified, "functional competencies", "personal competencies" and "broad business perspective competencies" (AICPA, 2006-2010). Communication skills are explicitly and implicitly identified in a number of the competencies identified in this framework, and many accounting programs include the development of good communication skills as an objective. Despite a lot of attention on developing oral and written skills in accounting programs, there is little or no published pedagogical literature on using student-produced videos in accounting courses. Further, an Internet search revealed that it is difficult to find solid evidence that student projects assigned in accounting courses incorporate video as a medium of communication. One notable exception is the IFRS video contest developed by Mark Holtzblatt and Norbert Tschakert as a form of experiential learning for graduate students. (Holtzblatt and Tschakert, 2011). The Purdue Center for International Business Education and Research (CIBER) awarded a grant to fund a related video project, suggesting that this use of videos for accounting education is regarded as innovative (Purdue CIBER, 2010). A search of YouTube suggests that students are producing videos to fulfill accounting assignments (e.g., Internal Controls in Accounting posted by treestan111 at http://www.youtube.com/watch?v=GXvOp853Om4), but it is difficult to identify the nature of these assignments and whether making a video was a requirement.

Despite scant evidence about the incorporation of student-produced videos in accounting courses, the Big Four firms' extensive use of video makes it is difficult to dismiss the proposition that familiarity with communicating within the video medium relevant for accounting students. Producing a video requires communication skills, but also creativity, personal presentation skills, teamwork, and technical/computer skills. Thus, the video medium facilitates development of several of the personal and functional competencies identified in the AICPA Core Competency Framework including reporting, professional demeanor, interaction, communication and leveraging technology to develop and enhance functional and personal competencies (AICPA 2006-2010). The fact that Big Four public accounting firms sponsor student video contests suggest these firms are interested in identifying and attracting future employees that possess the mix of skills necessary to produce and be featured in a quality video. In addition, the video medium facilitates self-assessment, which may be a valuable tool in enhancing the accuracy of students' self-perceptions with respect to their communication abilities and professional demeanor (O'Donoghue and Cochrane, 2010).

Incorporating student video projects into the accounting curriculum requires minimal expense and technical resources. Video cameras are quite inexpensive, and students often have the capacity to record video using their personal cell phones. Colleges often have video cameras available for student use. Video editing software is available as a standard feature on both Apple (e.g., iMovie) and PC (e.g., Microsoft Movie Maker) computers and included tutorials are sufficient to help even the most inexperienced users produce a relatively polished video. Finally a variety of resources are available to assist instructors in developing well-articulated video assignments and assessment rubrics. One particularly useful web sites is "Media Projects at

Dartmouth" accessible at http://dartmouth.edu/~videoprojects/wp/ (Simon, 2010). Thus, technical constraints are minimal.

Identifying appropriate content for a student video project is not challenging; the possibilities are infinite and can require minimal effort. One of the simplest ways to incorporate a student video project is to adapt an existing assignment for the video medium. Rather than requiring students to write a paper or make a classroom presentation, an assignment could require students to produce a video. For example, students could produce a video explaining the results of their research on a technical accounting issue. Rather than preparing a write-up of a case, students could prepare a video presenting their analysis and decision. In either of these examples, a video could be required in addition to a paper or written analysis. It is also simple to introduce a video assignment by requiring students to produce a video meeting the submission requirements of a student video contest. The PwC 2011 student "Elevator Pitch" competition asks students to make a 30-second video highlighting what makes them unique as a professional (PwC, http://www.facebook.com/PwCUSCareers?v =app_148823098508172&ref=ts). This project would be appropriate as an assignment in almost any accounting course, even those at the most introductory levels. Students earning course credit for internships could readily be required to prepare a video journal of their internship experience. A video project designed to develop interviewing skills might require students to produce videos featuring interviews of alumni, recruiters, and other accounting professionals. Such an assignment might refer students to the Big Four websites for tips on interviewing styles and personal presentation.

CONCLUDING REMARKS

The descriptive analysis of Big Four accounting firms' recruiting websites reveals an extensive use of video content featuring students, interns, and employees. This emphasis on video content is consistent with the assertion made by John Chambers, CEO of Cisco Systems Inc. that "Video is the new voice… If a picture is worth a thousand words, a multimedia video is worth a million words" (Jander, 2010). Further, as the Big Four accounting firms will likely continue to focus on a youthful recruiting image, their use of video may very well increase in the future. This suggests that command of the video medium is a relevant business skill for students planning to pursue careers in public accounting. Expanding accounting students' communication experiences by incorporating the video medium requires minimal resources, but nevertheless there is scant evidence that video assignments are being used to any great extent in accounting courses. Our descriptive analysis of both the extent and nature of the video content used on Big Four firms' recruiting websites makes a compelling argument for incorporating student-produced videos into accounting curricula. Doing so requires little investment and has the potential to better prepare students for both initial interviews and performance at various levels in public accounting firms.

REFERENCES

American Institute of Certified Public Accountants (2006-2010). *Core Competency Framework and Educational Competency Assessment Web Site.* Retrieved November 2010, from www.aicpa.org/InterestAreas/AccountingEducation/Resources/CurriculumDevelopment/CoreCompetency FrameworkandEducationalCompetencyAssessmentWebSite/Pages/default.aspx.

Armstrong, G.R., J.M. Tucker, & V.J. Massad (2009). Achieving learning goals with student-created podcasts. *Decision Sciences Journal of Innovative Education*, 7(1), 149-154.

Baldvinsdottir, G., J. Burns, H. Nørreaklit, & R.W. Scapens (2009). The image of accountants: from bean counters to extreme accountants. *Accounting, Auditing, & Accountability Journal*, 22(6), 858-882.

Best Places to Launch a Career 2009 (n.d.) *Bloomberg Businessweek.* Retrieved from http://www.businessweek.com/interactive_reports/career_launch_2009.html.

Deloitte (n.d.). It's your future. Retrieved from http://www.deloitte.com/view/en_US/us/Careers/index.htm.

Di Meglio, F. (2010, April 30). Dream jobs: college students get real. *Bloomberg Businessweek.* Retrieved from http://www.businessweek.com/managing/content/apr2010/ca20100428_482088.htm.

Ernst & Young (n.d.). A world of possibilities – right from day one. Retrieved from http://www.ey.com/US/en/Careers/Students

Furness, V. (2008, January 22). The new frontier. *Personnel Today*, 13-16.

Gilmore, L. (2010, August 31). Big Four planning to hire 20% more graduates this year than 2009. *Inaudit.* Retrieved from http://inaudit.com/audit/external-audit/big-four-planning-to-hire-20-more-graduates-this-year-than-2009-360/.

The Hottest Employers 2010 (n.d.). *Bloomberg Businessweek.* Retrieved from http://www.businessweek.com/interactive_reports/best_employers_2010.htm.

Holtzblatt, M. and N. Tschakert. (2011). Experiential learning via an innovative inter-university IFRS student video competition. *Accounting Education: An International Journal*, *99999*(1), 1-24.

Jander, M. (2010, July 1). Confessions of a reluctant video collaborator. *Internet Evolution*. Retrieved from http://www.internetevolution.com/author.asp?section_id=625&doc_id=193853.

KPMG (n.d.). Campus. Retrieved from http://www.kpmgcampus.com/index.shtml.

O'Donoghue, M., J. Chochrane (2010). The role of live video capture production in the development of student communications skills. *Learning, Media & Technology*, 35(3), 323-335.

Peacock, L. (2008, March 11). Digital channels. *Personnel Today*, 29-32.

Purdue CIBER. (2010). CIBER Awards Development Grant to Roosevelt University. Retrieved from http://www.krannert.purdue.edu/centers/ciber/home/CIBERAwardsDevGranttoRoosevelt.html.

PwC (n.d.). Build a career at PwC. Retrieved from http://www.pwc.com/us/en/careers/pwctv/index.jhtml.

Rose, J. (2007, September 18). Recruiters take hip path to fill accounting jobs. *The Wall Street Journal*, p. B8.

Ruiz, G. (2007). Firms tapping Web videos to lure job seekers. *Workforce Management*, 86(17)12.

Simon, S. (2010, April 7). Media projects at Dartmouth. Retrieved from www.dartmouth.edu/~videoprojects/wp/.

Treestan111. (n.d.). Internal controls in accounting. Retrieved from http://www.youtube.com/watch?v=GXvOp853Om4)

CHANGES IN MOTIVATION DURING AN MBA PROGRAM: GENDER MAKES A DIFFERENCE FROM FIRST-YEAR TO GRADUATION

Robert H. Epstein, University of Central Oklahoma
M. Suzanne Clinton, University of Central Oklahoma
Katerina Gabrovska, University of Central Oklahoma
Oleg Petrenko, Oklahoma State University

ABSTRACT

This multi-year study investigates student motivation at the beginning of an MBA program, and again at the end of the program. The study attempts to show that when students enter the program, they are primarily motivated by external factors (e.g., hoping for a promotion, hoping for a raise, hoping to obtain better employment than they currently hold, etc.). Further, the authors attempt to show how internal motivation (e.g., need for affiliation, need for achievement, self-actualization, etc.) increases by the end of the program; gender differences are also examined. The instrument the authors used was the Academic Participation Scale due to its distinction between different types of extrinsic and intrinsic motivation. Results indicate that intrinsic motivation of matriculated MBA students significantly increases for only female MBA students over the duration of the MBA program, but failed to confirm that extrinsic motivation of matriculated MBA students is significantly higher than extrinsic motivation of new MBA students.

INTRODUCTION

Students desiring a Masters of Business Administration (MBA) degree is at an all time high (Damast, 2007) and competition is growing as schools of business attempt to offer what students want (Krell, 2007). In the development of MBA degree programs, there are academic biases and market forces that together determine the scope and depth of the program offered. Regardless of the correctness of the academic biases, a program subsequently still must be acceptable in a competitive marketplace. Programs have a tendency to position themselves based on a comparison of national ranking (such as the *Forbes* ranking), job placement, name recognition, quality, opportunity cost and return on investment (ROI), price, and convenience. Convenience factors include hours of operation, ease of commute, number of required credit hours, and other factors that may increase or reduce a student's interest in a particular program. What is sometimes forgotten, however, is that students need to have a desire to earn an MBA:

they need to be motivated to enter a program, and they need to stay motivated throughout the program.

This paper examines what is known about the motivations of MBA applicants and matriculating MBA students, and proposes that extrinsic motivational factors attract students into an MBA program; but intrinsic motivational factors increase and help students matriculate successfully through the program.

EXTRINSIC AND INTRINSIC MOTIVATION DEFINED

Influences, according to self-determination theory (Deci & Ryan, 1985), can be either extrinsic or intrinsic. Ryan and Deci (2000, p. 56) define intrinsic motivation as "the doing of an activity for its inherent satisfactions rather than for some separable consequence."

> In an early research note, brophyand extrinsic dichotomy. They defined each:
> Intrinsic work motivation is a cognitive state reflecting the extent to which the worker attributes the force of his or her task behaviors to outcomes derived from the task per se; that is, from outcomes which are not mediated by a source external to the task-person situation. Such a state of motivation can be characterized as a self-fulfilling experience. (p. 497)

> Extrinsic work motivation is a cognitive state reflecting the extent to which the worker attributes the force of his or her task behaviors to having and/or expecting to receive or experience some extrinsic outcome. Such a state of motivation can be characterized as a regulated or instrumental experience... An extrinsic work outcome is an object or event received by a worker following the completion of a set of task behaviors which is dependent on a source external to the immediate task-person situation for delivery to take place. (p. 497-498)

Although the theory itself did not distinguish between different types of intrinsic motivation, Cokley's (2000) research divides it into three categories: intrinsic motivation to know, to accomplish things, and to experience stimulation.

Intrinsic motivation to know relates to curiosity, exploration and learning goals. In academic settings, it refers to students learning because they are curious about the subject and want to explore it further. Students who take classes outside of their degree requirements are often demonstrating this type of motivation, because the subject interests them and the whole benefit of the class is to satisfy their curiosity.

Intrinsic motivation toward accomplishment occurs when the accomplishment of a specific task or goal is important to the student. Those students tend to be more task-oriented and are eager to learn and study because they perceive receiving a good grade as an accomplishment. Similarly, many students are intrinsically motivated to earn a degree as a way to prove themselves of being capable to do so.

Intrinsic motivation to experience stimulation "is operative when someone engages in an activity in order to experience stimulating sensations" (Vallerand et al., 1992, p.1006), such as

fun, excitement, thrill or pleasure. Students who enjoy participating in class discussions or arguing about a topic in class may be experiencing this type of motivation.

Extrinsic motivation is "a construct that pertains whenever an activity is done in order to attain some separable outcome" (Ryan & Deci, 2000, p.60). Self-determination theory proposes that extrinsic motivation can be divided into three types: external regulation, introjection, and identification. Extrinsic motivation usually comes from outside influence factors, such as parents, employers, friends, environment (market, economic conditions, political situation, etc.) or desire for some tangible reward (better job, salary, promotion, etc.). According to Mirabela-Conostanta and Maria-Madela (2011, p. 671), "[many authors'] findings suggest that extrinsic incentives may have a negative impact on overall performance, but a general agreement in this respect has not been reached." Reasoning for this finding is the perception of the use of extrinsic rewards as behavior control. Opposite to this is the belief that intrinsic motivation increases with freedom of choice and autonomy (Ryan & Deci, 2000).

External regulation is the most typical form of extrinsic motivation; it comes from the outside factors that "regulate" the behavior, such as rewards or punishments. For example, a student decides to pursue an MBA degree because it is required for promotion within the company. External motivation is also present when a student thinks he is forced to do something by the circumstances, such as market demand for a particular type of degree.

Introjected regulation involves a certain degree of internalization by the student, when locus of control becomes more internal. However, it is still extrinsic, because it is often limited to the person's past external contingencies (Vallerand et al., 1992). A typical example of this motivation would be a student who goes to class because she feels she must do so in order to be considered a good student. Introjected regulation has a great degree of ego involvement and focuses on approval from self or others (Ryan & Deci, 2000).

Identification stands on the borderline between extrinsic and intrinsic motivation because the person consciously values both the educational experience and the end-result. The behavior becomes important for the person, and the person self-endorses the goals.

The last category of motivation is *Amotivation*. Vallerand (1992) states, that "individuals are amotivated when they do not perceive contingencies between outcomes and their own actions" (p. 1007). It is usually associated with high degree of external locus of control and feelings such as incompetence, uncontrollability and indifference. Amotivation also characterizes the lack of motivation on behalf of the individual and describes the activity's loss of value for the person. For example, Amotivation would surface when a student who enrolled in an MBA program to accumulate 150 hours to sit for the CPA exam later decides against pursuing the CPA. While such students might stay in the MBA program, they may not be motivated to participate or graduate.

What Do We Know About MBA Applicant Choices and Motivations?

"Motivation is a crucial issue for research because it influences the 'decision making processes determining the direction, focus, and level of effort individuals will apply to a learning activity'" (Cole, Feild & Harris, 2004, p. 67, as cited in Adcroft, 2010, p.11). Iyengar and

Lepper (1999, p.349), found as "self-evident" the connection between high motivation and implementing actions about which explicit choices had been made. Similarly, Reeve, Nix and Hamm's (2003) research showed high motivation in cases where students made explicit, proactive choices of what they studied.

Cole, Feild and Harris (2004) indicate that "because learning motivation is malleable and can change over time (Noe, 1986), one can expect that students' level of learning motivation may change over the course of the term. Specifically, students' motivations to learn might increase, decrease, or stay the same."

Breen and Lindsay (2002, p. 693) noted that "students who lack motivation can demotivate their peers and the academics who teach them, while Reeve et. al. (2003, p. 377) showed student motivation and teaching activities to be "'mutually supportive.'"

Perna (2004, p.489) noted "the expected benefits of enrolling in an advanced degree program include such short-term benefits as enjoyment of the learning experience and enhanced social status and such long-term benefits as higher lifetime earnings, enhanced occupational status, better working conditions, and lower probability of unemployment." This observation includes both intrinsic (e.g., enjoyment of the learning experience) and extrinsic motivators (e.g., enhanced social status, higher lifetime earnings, enhanced occupational status, better working conditions, and lower probability of unemployment). Perna's (2004) claims reveal a stronger emphasis on extrinsic motivators than intrinsic motivators.

In 2006, Massingham and Herrington noted that in the 1970s, students had three main motivations: "intellectual discovery", "desire for knowledge" and "enthusiasm" (p. 3). However, these motivations have changed, and education is now more of "a means towards some end, rather than being valuable in its own right" (Massingham & Herrington, 2006, p.3).

For the MBA degree, studies of why potential applicants pursue the degree are few and typically non-scientific. In one study (Quacquarelli, 2006) discussing a population of over 59,000 potential MBA students from over 37 countries, 5470 applicants completed a survey regarding numerous MBA factors. The greatest frequency of applicants was from India, followed by Egypt, the United States, Malaysia, and China. The average respondent overall was 26.8 years and single, and two-thirds of the respondents were male. In the US, however, males constituted 49% of the sample. About 87% were interested in a full-time MBA, and in the US/Canada, only 17% were interested in a one-year program whereas 72% indicated an interest in a two-year degree. The reputation or prestige of the program was the highest reported criteria for selection (school ranking was eighth); career placement, ROI, and financial support followed in order of importance. The ranked criteria that were lowest (from the bottom up): convenience of location, course length, and low cost.

What Do We Know About MBA Student Choices and Motivations?

Reasons for pursuing an MBA, in the Quacquarelli (2006) study, were highly tied to the applicants' desire to "get ahead" in business. These included: improve career prospects 73%; learn new skills 57%; build a professional network 42%; enable a career change by 37%; boost

salary 29%; and, start a business 24%. Only 26% reported that education was a reason to pursue the MBA!

In another, also non-random survey (Admission Consultants, 2005), respondents were asked, "What is the main reason you want an MBA?" Seeking a life-altering experience (31%), more money (29%), leave unfulfilling career (17%), and prestige of the degree (16%) were the top four responses.

These reasons delineated for pursuing an MBA are similar to those reported by Dubin (1990), Farr and Middlebrooks (1990), and Naquin and Holton (2003). Each of these researchers reported extrinsic motivations revolving around improvements in work outcomes: increased income, recognition by managers or peers, and greater chances for promotion.
Singh and Dash (2010) measured the levels of importance of different internally- and externally-oriented aspirations a group of Indian students had to pursue an MBA degree. The dimensions perceived by the Indian postgraduate management students to be most important on average were personal growth, followed by health, relationship and community.

There are also only a few published studies that ask matriculating MBA students about their motivations to pursue an MBA. These studies presume that the student can think back and recall their motivations when they were applicants.

And What Do We Know About When MBA Students Have Matriculated?

Thompson and Gui (2000) asked 130 students in a Hong Kong Executive MBA program why they decided to pursue an MBA. Reasons identified include: improve analytical ability, learn more about business management, get an MBA degree qualification, learn practical approaches to business management, make me better at my job, obtain better prospects of switching career path, learn more theoretical approaches to business management, improve self-esteem/image, make new business contacts, make new friends, make more money, gain the respect of others, and good way to use spare time. They report "overall motivations relating directly to learning objectives scored the highest" (p. 237). While these results showed differences due to "gender, age, work experience, and educational background" (p. 240), "to improve your analytical ability" always topped the list while "To make more money" was always near the bottom.

In a study that used both qualitative and quantitative analyses, Rapert, Smith, Velliquette, and Garretson (2004) attempted to determine what was important to matriculating MBA students (*n*=38) in a southeastern, public university. Their research generated seven in-class quality characteristics and four outside-of-class characteristics that they called *metathemes*. The in-class *metathemes* included: encourages intellectual growth; overall professionalism; specialized training and instruction; generalized and integrated training and instruction; and teamwork and group dynamics. The outside class *metathemes* were: integration with the business community; career preparation services; program clarity; and financial assistance.

Motivations Change

Comparing the results of the studies regarding new and matriculating students mentioned above, the motivations of students seem to change between applicant status and matriculating student.

Using Brief and Aldag's dichotomy (with controversy set aside, e.g., Kanungo & Hartwick, 1987; Covington & Mueller, 2001), it is proposed that the research presented earlier in this paper demonstrates that there are stronger extrinsic and weaker intrinsic motivations when students are applicants, but they change to weaker extrinsic and stronger intrinsic motivations when they are matriculating. For example, in contrast to the research by Quacquarelli (2006) where only 26% of the applicants expressed an interest in "improve their education," in the Rapert et al. (2004) study, 75% of the matriculating students indicated that a program should "encourage intellectual growth." This is intrinsic motivation. On the other hand, and in the opposite direction, Quacquarelli (2006) reported an extrinsic motivating factor such as "improve career prospects" at 73% for applicants compared to the 28% reported by Rapert et al. for the importance of "career preparation services" to matriculating students.

To summarize at this point, while extrinsic motivation seems to drive students to an MBA program in hopes of career growth and higher salaries, it appears from the paltry but significant evidence identified in this paper so far that intrinsic motivational factors grow as students matriculate.

The motivations of MBA students are important in understanding their decision-making process in selection of MBA programs. It is also important to understand whether initial motivations, such as to increase career opportunities, dominate the decision making process in pursuit and selection of an MBA program. At a different time, when the student has entered a program and is matriculating, do the motivations change from the initial motivations? Motivation can be viewed as different influences upon the students during their decision-making process and during matriculation.

Getting ahead in business historically meant moving up the corporate ladder in both position and income. Today, students also want to be able to climb multiple ladders, having the ability to move among fields based on their satisfaction or dissatisfaction with their current work. In anticipation of this need, MBA students while in an MBA program develop an increased appreciation for education. Unfortunately, this phenomenon has not been directly studied. While several studies have looked at MBA success, they have focused on tuition and cost (Montgomery & Powell, 2006) and demographics and experience (Sulaiman & Mohezar, 2006). Although one study indicating the importance of "increase[ing] and enhance[ing] student intrinsic interest in the subject matter [for a particular course]" (McEvoy, 2011, p.468) was located, no study was found that focuses on the intrinsic motivation that develops or "surfaces" during the MBA experience. This is a concern. As a result, we propose testing the following alternative hypotheses:

> H_1A: *Intrinsic motivation of matriculated MBA students is significantly higher than intrinsic motivation of new MBA students.*

H_1B: *Extrinsic motivation of matriculated MBA students is significantly lower than extrinsic motivation of new MBA students.*

H_1C: *Amotivation of matriculated MBA students is significantly lower than Amotivation of new MBA students.*

Gender May Make A Difference

The literature is unclear as to the role of gender on the motivational changes during graduate study. Perna (2004, p. 488) noted that "few theoretically based, methodologically rigorous studies have explored the sources of observed sex…differences in graduate school enrollment…"

On the other hand, studies using high school and college students have found motivation differences moderated by gender. Pratch and Jacobowitz (1996) note that motivational differences can be attributed to gender and mediate leadership styles. "Women are expected to display high levels of communal (social) qualities" whereas "Men are expected to have high levels of agentic (instrumental) attributes" (p. 204).

Kugihara (1999) studied gender differences in social loafing/quality of achievement motivation by having participants pull on ropes as if in tug-o-war. Measures of independent and group power were taken and showed that "women tended to loaf less than the men, and the men's effort suddenly declined when the situation was changed from an individual to a collective work setting. However, the women did not show that change" (Kugihara, 1999, p.516).

"Many researchers have found gender differences in achievement motivation, goals, and classroom performance (cf. Meece & Holt, 1993; Spence & Helmreich, 1983), and we therefore tested for gender effects in all analyses" (Harackiewicz, Barron, Carter, Letho, & Elliot, 1997, p. 1288). Harackiewicz, Barron, Carter, Letho, and Elliot (1997) found that while male students were more competitive, "female students were more likely to adopt mastery goals, … endorse performance goals, … enjoyed the class more, … [and] achieved higher grades" (p. 1289). Harackiewicz, J. M., Barron, K. E., Tauer, J. M., & Elliot, A. J. (2002) explain "When pursuing mastery goals in a learning situation, a student's purpose is to develop competence by acquiring new knowledge and skills. When pursuing performance goals, a student's purpose is to demonstrate competence relative to others. Not all students are positively oriented toward competence, however, and some adopt work avoidance goals that focus on effort minimization (Brophy, 1983; Nicholls, 1989)" (p. 562).

Fairfield-Sonn, Kolluri, Singamsetti and Wahab (2010) found that differences in GPA among 833 University of Hartford MBA students was most reliably predicted by gender. Similar research by Sheard's (2009) and Nguyen, Allen, and Fraccastoro (2005) showed females outperform males academically. Females outperformed males in undergraduate English and Math courses in Administration students outperformed males in Busch's (1995) study. Female online students also performed better than male online students (Chyung, 2007). Overall, Griffin, MacKewn, Moser and Van Vuren (2011, p.481) found that "female[s] display[ed] a greater degree of motivation towards academic achievement than [did] males."

According to Marrs and Sigler (2011), "While in college, there is evidence that men are less academically engaged than women, which subsequently impacts the quality of the educational experience during college (Kinzie et al., 2007; Sax, 2008)" (p. 1). There are differences in values which lead to differences in how they value various activities and tasks, and subsequently this influences task choice and performance outcomes (Greene & DeBacker, 2004). Marrs and Sigler glean from this and other studies that "it appears well documented that college men study less than college women" (p. 2). Smith and Miller (2005) found gender affected achieving strategy, where "females were more consistent and regular in their study habits" (p. 51).

Mirabela-Conostanta and Maria-Madela's (2011) work showed that at the university level, female students outperformed male students. Their work failed to show significant differences between male and female students' motivation, yet "the percentage of men who are intrinsically motivated [was] higher than that of women" (p.675).

Based on most of the above studies (with one exception), females tend to be more highly intrinsically motivated than males. Most studies have been conducted during various time slices in programs, but not from beginning to end. Women have been found to frequently perform better than men, while men have been found in the time slices with higher intrinsic motivation. Overall, it appears that gender should influence a change in motivation over the course of a program, more specifically a fourth alternative hypothesis:

> H_1D: *Results differences between matriculated MBA students and new MBA students would be greater for females than for males.*

METHODS

A modified version of Academic Motivation Scale (AMS-C 28) by Vallerand, Pelletier, Blais, Briere, Senecal and Vallieres (1992) was used to create a survey for the first-year MBA students.

Measures: Academic Motivation Scale

Numerous tools are available to identify individual motivation. The Academic Motivation Scale (AMS) has been successfully used in academic settings to study motivations of students. AMS is an English adaptation of the *Echelle de Motivation en Education* (EME), first tested by Vallerand et al. in a 1992 validity study. Since then, additional research and different validation studies have been conducted using AMS to identify the academic motivation of students. Fairchild et al. (2005) evaluated contemporary validity evidence and presented further evidence to validate the AMS. Fairchild et al. conclude that the model outperformed other similar models and adequately measured academic motivation.

The Academic Motivation Scale is composed of 28 items divided into 7 types of motivation discussed above. Students rank each scale item from "1 – does not correspond at all"

to "7 – corresponds exactly." The high score on a particular type of motivation shows its higher influence on the behavior and decision-making process of the student.

Measures: Education Participation Scale

Other models to measure academic motivation include Education Participation Scale (EPS) developed in New Zealand by Boshier (1971). He divides motivation into two categories: homeostasis and heterostasis. A homeostasis motivation derives from student's perception of instability, which is external to the student. Education is perceived to alleviate the instability for the student. Heterostasis motivation comes from the student's desire to fulfill his personal needs of growth and learning. The scale is divided into six factors: social contact, social stimulation, professional advancement, community service, external expectations, and cognitive interest. EPS focuses highly on intrinsic motivation and has been successful in some motivation studies. For example, Dia, Smith, Cohen-Callow and Bliss (2005) found EPS to be a "valid and reliable measure for identifying motivational orientations of social workers who pursue continuing professional education" (Abstract). This study, however, chose to use the Academic Participation Scale due to its distinction between different types of extrinsic and intrinsic motivation and its inclusion of the Amotivation measurement.

MBA Program

The researchers studied a population of MBA students in a southwestern comprehensive state university. This MBA program is open to both business and non-business majors and requires no prerequisites other than a bachelor's degree; there are no foundation course requirements. Previous work experience is not required but more than 90% of the students have worked in full-time jobs. The program serves working professionals in its greater metropolitan area with all classes offered evenings only to accommodate students' work schedules. The program provides basic core knowledge by employing several innovative strategies designed for a transformative learning experience. Classes include many team projects. Its thirty-five hour program consists of seven five-hour inter-disciplinary courses that are team taught: Leading Global Competitive Environment; Human Capital Management; Prices, Profits & Market Economy; Managing Business Processes with Information Technology; Seminar: Integrating Accounting & Finance; Quantitative Modeling; and Strategic Integration. Each course includes a one-hour online component each week to allow students more flexibility in course and work scheduling.

The primary reasons given for enrolling in this particular MBA program over others are convenience and the low cost of state tuition. Only about 15% of the students indicated that they wanted to learn new skills or improve their education as their primary reason for entering the program; the other 85% were attempting to improve career prospects, making a career change, or starting their own business. Students can take the program at their own pace and it can be completed in as little as twelve months. Most students graduating from the program score about the mean on the Major Field Test (MFT) while class averages range in the 60th to 80th percentile.

Surveys

Invitations to participate in surveys were sent via e-mail by the MBA Office to all new and matriculating MBA students and stressed the voluntary nature of the study per Institutional Review Board rules. Only students who received the e-mail were eligible to participate in the survey.

The surveys were used to evaluate the MBA program and were made available to students using Survey Monkey (http://www.surveymonkey.com). The first survey included questions regarding program selection, media use, general questions about students' expectations, motivation, and demographics; the last survey examined satisfaction, motivation, suggestions for improvement, plans, and demographics. Both surveys also allowed space for additional comments. Students received other surveys while in the program, typically one per semester. It was estimated that these surveys should take about 7-10 minutes each to complete. A week after sending an initial e-mail to participate, reminders were sent to the students who did not complete the survey once per week over a two-week period.

Sample

For four semesters, Fall 2007, Spring 2008, Fall 2008, and Spring 2009, 193 first-year MBA students were sent e-mail invitations to complete a new MBA student survey; of these, 132 (68.4%) completed the survey. Subsequently, between Fall 2008 and Fall 2010, of the students who completed this initial survey, 46 (34.9%) completed a second survey at the time of their graduation, providing a beginning-end comparison of changes in their measures. In this sample, 21 (45.7%) are female, 38 (83%) U.S. citizens, 25 (54.3%) undergraduate business majors, They had a starting median age between 26 and 30, 2 or less years of managerial experience, 5-6 years of non-management experience, and started the program in a job working 31-40 hours per week and ending it working 21-30 hours per week. No employer assistance was received by 14 students (31.1%), and paying their entire tuition were 28 (62.2%) students.

Four students who completed both surveys and either did not answer all the motivation questions or gave the same answer to every question were removed from the study. As previously stated, 46 useful pairs of surveys were obtained.

DATA ANALYSIS

SPSS (Ver. 17) was used to provide the statistical analysis. To test the four hypotheses, Cronbach's alpha and repeated measures analysis of variance were run. According to Gliem and Gliem (2003, p. 88):

> When using Likert-type scales it is imperative to calculate and report Cronbach's alpha coefficient for internal consistency reliability for any scales or subscales one may be using. The analysis of the data then must use these summated scales or subscales and not individual items. If one does otherwise, the reliability of the

items is at best probably low and at worst unknown. Cronbach's alpha does not provide reliability estimates for single items.

Cronbach's alpha correlation coefficients for the seven measures used is this study are shown in Table 1. Scores above .7 are usually considered as acceptable. The EMID (Extrinsic Motivation – Identification) appears to be internally unreliable and perhaps suggests that the measure is composed of multiple constructs. Earlier research (Vallerand et al., 1992) had suggested that EMID is on the borderline between intrinsic and extrinsic, and this may have caused some of the increased variability. However, when included in a summative measure of extrinsic motivation, use of EMID pre- and post-Likert-style measures add to the reliability of the summative score by .1. Finally, the Amotivation Scale (AIM) is acceptable but barely passes the .7 threshold. All the remaining scales are either good (>.8) or excellent (>.9). Subsequently, the authors decided to include all scales and summative scores.

| Table 1: Cronbach's Alpha for 7 Scales in the Academic Motivation Scale								
Scale	Pre	Post	Both					
EMER	0.706	0.724	0.812					
EMID	0.453	0.689	0.605*	*no reduction would increase Cronbach above .7				
EMIT	0.889	0.855	0.906					
EXT	0.571a	0.621b	0.732c	a - would increase to .675 if deleted EMIT				
				b - would increase to .724 if deleted EMIT				
				c - would decrease to .632 if deleted EMID/PEMID				
IMA	0.872	0.870	0.924					
IMK	0.868	0.899	0.928					
IMS	0.792	0.833	0.875					
INT	0.886	0.829	0.917					
AIM	0.735	0.657	0.730					

RESULTS

Students change as they move from new student to graduating student. In the surveys administered during this study, one question rated the importance of different MBA characteristics. Figure 1 summarizes these results.

Focusing on the hypotheses presented earlier, composite pre- and post-measures and summative scores were calculated using a repeated measures analysis of variance. These results (*n*=46) are summarized in Table 2.

The first hypothesis, based on the summative Intrinsic Motivation score (all three measures combined) found the students' graduating means to be significantly greater ($p<.05$) than their entering the program means. Only one of the composite scores (IMK – intrinsic motivation to know) by itself was found to have pre/post significant differences, although all composite scores showed gains. The means are shown below in Table 3.

H₁A: Intrinsic motivation of matriculated MBA students is significantly higher than intrinsic motivation of new MBA students,

Figure 1: MBA Evaluation Criteria: Comparison of New Students to Graduating Students
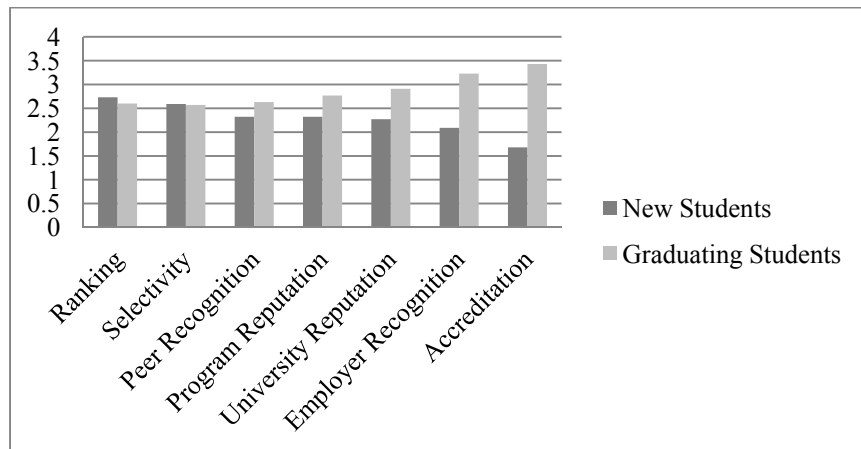
Table 2. Change Over Time with Gender (n=46)			
		Within-group	Between group
Motivation Category	*Time* F	*Time* x *Gender*	*Gender*
IMK (to know)	7.96*	9.60*	0.81
IMS (to experience stimulation)	1.26	0.03	4.49*
IMA (toward accomplishment)	1.89	3.93(.054)	0.35
Intrinsic Motivation	**5.30***	**4.19***	**0.55**
EMER (external regulation - $)	4.71**	0.00	0.24
EMID (identified - career)	2.03	6.54*	0.60
EMIT (introjected - self)	0.11	0.81	1.44
Extrinsic Motivation	**2.79**	**2.54**	**1.28**
Amotivation	**5.07***	**.091**	**2.24**
* $p < .05$ ** $p < .05$ but in opposite direction predicted			

Table 3. Overall Mean Comparisons (n=46)		
Motivation Category	**Pre**	**Post**
IMK (to know)	4.09	4.40*
IMS (to experience stimulation)	2.72	2.88
IMA (toward accomplishment)	3.82	3.97
Intrinsic Motivation	**3.54**	**3.75***
EMER (external regulation - $)	5.02	5.36**
EMID (identified - career)	5.10	5.32
EMIT (introjected - self)	3.84	3.89
Extrinsic Motivation	**4.65**	**4.86**
Amotivation	**1.88**	**1.53***
* $p<.05$ ** $p<.05$ but in wrong direction		

The second hypothesis, was not supported. Using the summative Extrinsic Motivation score, the students' graduating means were greater than their entering the program mean, rather than less as predicted.

> *H₁B: Extrinsic motivation of matriculated MBA students is significantly lower than extrinsic motivation of new MBA students,*

For the third hypothesis, a significant difference (*p*<.05) was found.

> *H₁C: Amotivation of matriculated MBA students is significantly lower than Amotivation of new MBA students,*

Because of the potential of gender differences suggested by the literature, the analyses of variance included and examined interaction (time x gender) effects and effects based on gender alone. Following the ANOVA, *t*-tests were performed to examine within gender differences. Table 4 lists the comparisons of means for males and females.

Table 4. Comparisons of Means				
	Males (n=25)		Females (n=21)	
	Pre	Post	Pre	Post
Motivation Category				
IMK (to know)	4.41	4.37	3.71	4.42*
IMS (to experience stimulation)	3.00	3.19	2.38	2.52
IMA (toward accomplishment)	3.83	3.75	3.81	4.25*
Intrinsic Motivation	**3.75**	**3.77**	**3.30**	**3.73***
EMER (external regulation - $)	4.95	5.29	5.11	5.45
EMID (identified - career)	5.23	5.03	4.95	5.65**
EMIT (introjected - self)	3.69	3.58	4.01	4.25
Extrinsic Motivation	**4.62**	**4.63**	**4.69**	**5.11**
Amotivation	**2.05**	**1.66***	**1.67**	**1.38**
* *p*<.05 ** *p*<.05 but in wrong direction				

Male MBA students did not have any significant differences on the intrinsic or extrinsic composite or summative measures. Interestingly, two of the intrinsic measures showed post-test decreases instead of decreases although none were significant. Two of the extrinsic composite measures showed decreases as predicted, but also were not significant. Amotivation for males significantly decreased.

As can be seen in Table 4, female MBA students had significant gains on two of the intrinsic motivation composite or summative measures of intrinsic motivation; they surprisingly showed increases on all extrinsic measures, where on EMID, if it had been predicted, was significantly different. Unlike the male MBAs, female MBAs did not achieve a significant decrease in Amotivation; the female MBAs started with a lower Amotivation score than the male MBAs (close to the post score of the male MBAs), and as predicted decreased.

DISCUSSION

The first hypothesis, 1A, that intrinsic motivation of matriculated MBA students is significantly higher than intrinsic motivation of new MBA students, was confirmed by a significant increase in Intrinsic Motivation for matriculating MBA students compared with new MBA students: from 3.54 to 3.75. The primary cause appears to be Intrinsic Motivation to Know (IMK), which increased significantly from 4.09 to 4.40; students increased their curiosity and desire to learn. Both Intrinsic Motivation to Experience Stimulation (IMS) (2.72 to 2.88) and Intrinsic Motivation toward Accomplishment (IMA) (3.82 to 3.97) increased over the course of the program, but were not significant (at $p < .05$). Respectively, students felt some pleasure as they encountered the program activities (IMS), and developed a sense of accomplishment (IMA). Hypothesis 1B, a reduction of extrinsic motivation of matriculated MBA students, was not significant. In fact, rather than decreasing, all extrinsic measures increased. One extrinsic motivation composite score resulted in a significant change, if it had been predicted; that was Extrinsic Motivation External Regulation (EMER) that showed a significant increase from 5.02 to 5.36. The work environment and other forces outside the MBA program may have changed as students progressed in such a way as to increase the need to achieve the MBA degree. Also, as students progressed in the program, as they were nearing graduation, it is likely that one thing stood out in their minds, that soon there would be rewards, such as what the extrinsic rewards represent.

Hypothesis 1C, Amotivation of matriculated MBA students is significantly lower than Amotivation of new MBA students, was confirmed by the significant differences between entering and graduating. MBA students may have recognized that the work they did in the MBA was leading to something useful, particularly as they approached graduation.

The analyses of gender in Tables 2 and 4 provide interesting results that were proposed by H_{1D} and also surprising. What was stated earlier in this section may be more due to female MBA changes than male. Male MBAs only had significant changes on the Amotivation measure, which decreased as expected. Female MBAs demonstrated significant gains in two (IMK and IMA) out of the three intrinsic composite measures as well as the overall summative intrinsic measure. Surprisingly, the female MBAs demonstrated a significant gain in the extrinsic factor related to career (EMID). When compared on *t*-tests, the men's entering IMA scores were significantly ($p<.05$) higher than the women's scores; but upon graduating, the women were similar to the men on IMA. Although not significant, whereas two of the men's extrinsic scores went down (EMID and EMIT), the women's extrinsic scores all went up!

Overall, it would appear that this particular MBA program did little to change male MBA motivations, other than time spent in the program appears to have significantly reduced the incongruence (Amotivation) the male MBAs may have felt when they initially entered the program. Female MBAs entered the program with lower intrinsic motivation and upon graduating, were at the same overall level as male MBAs. Looking at intrinsic composite measures, the male MBAs started at a higher level on IMK than females, and subsequently the males did not change while the females rose to the same level as the males. Did the male MBAs already possess a sufficient level of intrinsic motivation to know, to want to learn, whereas the female MBAs reached that level by interacting with the males? IMS did result in increases, but

not significant, for both groups; females started lower than the males and remained lower. As was said earlier, students who enjoy participating in class discussions or arguing about a topic in class may be experiencing this type of motivation. While it is probably good to see increases in both genders, the females may have not increased any greater than typical male dominance would allow. And finally, the female MBAs started at the same IMA level as the male MBAs and achieved a significant increase; the male MBAs did not. The female MBAs scored as predicted: they may have felt a greater need to prove themselves or to achieve better grades; in addition, whether it was a manifestation of earlier behaviors or a presumed greater number of female responsibilities outside the classroom may have led to the female MBAs being more task-oriented.

On the summative extrinsic measures, men did not change overall whereas females did, but not significantly. Both genders increased on the EMER measure, females increased significantly on EMID, and males did not increase on EMIT whereas females did. As stated earlier, the work environment and other outside forces are the major cause of changes in EMER, and this seems to have equally affected both genders. On the other hand, the female MBAs demonstrated a greater and significant increase in their identification (EMID) as an MBA, starting lower than the men and increasing beyond them as the men's identification with the MBA went down. On EMIT, female MBAs started higher and increased over the duration of the program (although not significantly), whereas the males did not change; the female MBAs may have felt an initial higher need to prove themselves due to external forces and this increased over the duration of the program.

Finally, both genders found increased reasons and contingencies to pursue an MBA as they stayed in the program, but only the male MBAs demonstrated a significant decrease in Amotivation. This may have been because the female MBAs were already more assured when they started the MBA.

LIMITATIONS AND FUTURE STUDY

This study focused on one MBA program, one that is different from many others. Applicants to the MBA program come from both business and non-business undergraduate programs. The MBA program does not require any specific prerequisite coursework, however, students entering the program are expected to be proficient in common computer software applications for business. Required preparation is delineated in the graduate catalog and entering students are given a detailed orientation each semester. This is followed by regular contacts through the MBA program office. Each faculty member team communicates directly any specific requirements needed for the courses they teach. Each of the seven five-hour courses are team-taught. The integrated team-teaching approach used in the MBA program has created an atmosphere of professional respect among program faculty. By necessity, team-teaching faculty members share skills, ideas, and thoughts about "best practices" in teaching. Faculty members report that innovative partnerships have developed in many areas.

One method of internal program assessment is via a nationally normed test, the MFT, which tests discipline knowledge across the entire spectrum of MBA subject matter. Despite having approximately fifty percent of our matriculants with no formal business education, our

graduates' average MFT score is greater than that of AACSB accredited MBA programs. Another internal measure of quality is the satisfaction surveys that are administered to all graduating students. This survey is based on the ServQual instrument which measures customer satisfaction in the service sector. Root cause analysis is performed on areas of concern and the Assistant Dean and GCC develop action plans to address perceived shortcomings.

The primary questions that require further investigation are what in an MBA program affects intrinsic and extrinsic motivation, and is that important for matriculation. Extrinsic motivation increased where it was predicted that it would decrease; is extrinsic motivation equally or more important than intrinsic motivation for successful MBA completion? Does an MBA program have much control over extrinsic forces?

This study suffers also from several internal validity issues of a quasi-experimental design. A small sample (n=46) of the entire MBA program sufficiently participated by completing both pre- and post-tests. This may have resulted from self-selection and experimental mortality. There were students who for reasons unexplained did not complete either the pre- or post-survey or both, and the research also has not as yet looked at students who did not graduate to see whether they had similar changes in motivation. The testing itself may have added to the treatment.

Future studies might also revisit the instrument. The authors' analyses, based on the Cochran's reliability coefficients and factor analysis, found that several Likert-style statements did not contribute to the overall score differences and may have even seemed conflicted with the intent of the measure. Even further, some of the extrinsic measures seem to represent possible intrinsic motivational constructs rather than extrinsic.

CONCLUSIONS

Although the results of this study were somewhat mixed, it is important to realize that educators need to develop an understanding of the motivations of MBA applicants and matriculating MBA students. Generally, it is extrinsic motivational factors that attract students into an MBA program; but intrinsic (and probably extrinsic) motivational factors may help students matriculate successfully through the program. In order to attract and retain MBA students, educators can make use of extrinsic motivational factors while pursuing and providing experiences that develop intrinsic motivation during the MBA program. Differences in gender need to be considered. As educators, the authors would like to believe that intrinsic motivation is developed in the MBA and subsequently, provides the basis for lifelong learning.

REFERENCES

Adcroft, A. (2010). The motivations to study of undergraduate students in management: The impact of degree programme and level of study. *International Journal of Management Education*, *9*(1), 11-20.

Admission Consultants. (2005). MBA acceptance preference. *MBA Reasons Poll.* Retrieved on September 4, 2007, from *http://www.admissionsconsultants.com/mba/mba-reasons.asp*

Boshier, R. (1971). Motivational orientations of adult education participants: A factor analytic exploration of Houle's typology. *Adult Education Journal, 21*(2), 3.

Breen, R., & Lindsay, R. (2002). Different disciplines require different motivations for student success. *Research in Higher Education, 43,* 693-725.

Brief, A. P., & Aldag, R. J. (1977, July). The intrinsic-extrinsic dichotomy: Toward conceptual clarity. *Academy of Management Review*, *2*(3), 496-500.

Brophy, J. E. (1983). Conceptualizing student motivation. *Educational Psychologist, 18,* 200-215.

Busch, T. (1995). Gender differences in self-efficacy and academic performance among students of business administration. *Scandinavian Journal of Educational Research, 39,* 311-318.

Chyung, S. Y. (2007). Age and gender differences in online behavior, self-efficacy, and academic performance. *The Quarterly Review of Distance Education, 8(3),* 213-222.

Cole, M., Field, H. & Harris, S. (2004). Student learning motivation and psychological hardiness: Interactive effects on students' reactions to a management class. *Academy of Management Learning Education*, *3*, 64-85.

Cokley, K. (2000). Examining the validity of the academic motivation scale by comparing scale construction to self-determination theory. *Psychological Reports, 86*(2), 560-565.

Covington, M. V., & Mueller, K. J. (2001, June). Intrinsic versus extrinsic motivation: An approach/avoidance reformulation. *Educational Psychology Review, 13*(2), 157-176.

Cullen, M., Hardison, C., & Sackett, P. (2004). Using SAT-grade and ability-job performance relationships to test predictions from stereotype threat theory. *Journal of Applied Psychology, 89(2),* 220-230.

Damast, A. (2007, August 16). MBA applications reach record high. *Business Week Online*. Retrieved on October 9, 2007, from EBSCOHOST database.

Deci, E. & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Dia, D., Smith, C., Cohen-Callow, A., & Bliss (2005, May). The education participation scale-modified: Evaluating a measure of continuing education. *Research on Social Work Practice, 15*(3), 213-222.

Dubin, S.S. (1990). Maintaining competence through updating. In S. Willis & S. S. Dubin (Eds.), *Maintaining professional competence* (pp. 9-43). San Francisco: Jossey-Bass.

Fairchild, A.J., Horst, S.J., Finney, S.J., & Barron, K.E. (2005). Evaluating existing and new validity evidence for the Academic Motivation Scale. *Contemporary Educational Psychology, 30*, 331-358.

Fairfield-Sonn, J.W., Kolluri, B., Singamsetti, R., & Wahab, M. (2010). GMAT and other determinants of GPA in an MBA program. American Journal of Business Education, *3*(12), 77-85.

Farr, J., & Middlebrooks, C. (1990). Enhancing motivation to participate in professional development. In S. Willis & S. S. Dubin (Eds.), Maintaining professional competence (pp. 199-213). San Francisco: Jossey-Bass.

Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's Alpha reliability coefficient for Likert-type scales. In T. R. Ferro & G. J. Dean (Eds.), *Proceedings of the 2003 Midwest Research to Practice Conference in Adult, Continuing, and Community Education* (pp. 82-88). Indiana, PA: Indiana University of Pennsylvania Press.

Greene, B. A., & DeBacker, T. K. (2004). Gender and orientations toward the future: Links to motivation. *Educational Psychology Review, 16,* 91-132.

Harackiewicz, J. M., Barron, K. E., Carter, S. M., Lehto, A. T., & Elliot, A. J. (1997). Predictors and consequences of achievement goals in the college classroom: Maintaining interest and making the grade. *Journal of Personality and Social Psychology, 73*(6), 1284-1295.

Harackiewicz, J. M., Barron, K. E., Tauer, J. M., & Elliot, A. J. (2002). Predicting success in college: A longitudinal study of achievement goals and ability measures as predictors of interest and performance from freshman year through graduation. *Journal of Educational Psychology, 94* (3), 562-575.

Iyengar, S. S. & Lepper, M. R. (1999). Rethinking the value of choice: A cultural perspective on intrinsic motivation. *Journal of Personality and Social Psychology, 76*, 349-366.

Kanungo, R. N., & Hartwick, J. (1987). An alternative to the intrinsic-extrinsic dichotomy of work rewards. *Journal of Management, 13*(4), 751-766.

Kinzie, J., Gonyea, R., Kuh, G. D., Umbach, P., Blaich, C., & Korkmax, A. (2007, November). *The relationship between gender and student engagement in college.* Paper presented at the 32nd Annual Conference of the Association for the Study of Higher Education, Louisville, KY.

Krell, E. (2007, Spring). The business of business schools is changing and Hankamer is adapting, competing and excelling. *Baylor Business Review, 25*(2) 4-8.

Kugihara, N. (1999). Gender and social loafing in Japan. *Journal of Social Psychology, 139*(4), 516-526.

Marrs, H., & Sigler, E. A. (2011, March 14). Male academic performance in college: The possible role of study strategies. *Psychology of Men & Masculinity.* Advance online publication. doi: 10.1037/a0022247.

Massingham, P.&Herrington, T. (2006). Does attendance matter? An examination of student attitudes, participation, performance and attendance. *Journal of University Teaching and Learning Practice*, *3*, 82-103.

McEvoy, G. M. (2011). Increasing intrinsic motivation to learn in organizational behavior classes. *Journal of Management Education, 35*(4), 468-503.

Meece, J. L., & Holt, K. (1993). A pattern analysis of students' achievement goals. *Journal of Educational Psychology, 85,* 582-590.

Mirabela-Constanta, M. & Maria-Madela, A.(2011). Intrinsic and extrinsic motivation. an investigation of performance correlation on students. *Annals of the University of Oradea, Economic Science Series, 20*(1), 671-677.

Montgomery, M., & Powell, I. (2006, March/April). The effect of tuition and opportunity cost on the pursuit and completion of a graduate management degree. *Journal of Education for Business*, *81*(4), 190-200.

Naquin, S. & Holton, E. (2003). Motivation to improve work through learning in human resource development. *Human Resource Development International*, *6*(3), 355-370.

Nguyen, N. T., Allen, L., & Fraccastoro, K. (2005). Personality predicts academic performance: Exploring the moderating role of gender. *Journal of Higher Education Policy and Management, 27*(1)*,* 105-116.

Nicholls, J. G. (1989). *The competitive ethos and democratic education.* Cambridge, MA: Harvard University Press.

Noe, R. A. 1986. Trainees' attributes and attitudes: Neglected influences on training effectiveness. *Academy of Management Review*, *11,* 736–749.

Perna, L. W. (2004, Sept./Oct.). Understanding the decision to enroll in graduate school: Sex and racial/ethnic group differences. *The Journal of Higher Education 75(5),* 487-527.

Quacquarelli, N. (2006). *Top MBA.com survey of MBA applicants 2006.* London, UK: QS Quacquarelli Symonds Ltd. Retrieved on October 9, 2007, from http://www.coolavenues.com/gmat/mba-applicants-1.php

Rapert, M. I., Smith, S., Velliquette, A., & Garretson, J. A. (2004, Sept./Oct.). The meaning of quality: Expectations of students in pursuit of an MBA. *Journal of Education for Business*, *80*(1), 17-24.

Reeve, J., Nix, G., & Ham, D. (2003). Testing models of the experience of self-determination in intrinsic motivation and the conundrum of choice. *Journal of Educational Psychology, 95,* 375-392.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54-67.

Sax, I. (2008, Sept. 26). Her college experience is not his. *The Chronicle of Higher Education, 55*(5), A32-A33.

Sheard, M. (2009). Hardiness, commitment, gender and age differentiate university academic performance. *British Journal of Educational Psychology, 79*, 189-204.

Singh, A., & Dash, M. (2010). A study of aspirational differences among MBA students. *The IUP Journal of Organizational Behavior, 9*(4), 44-56.

Smith, S. N., & Miller, R. J. (2005). Learning approaches: Examination type, discipline of study, and gender. *Educational Psychology, 25*, 43-53.

Spence, J.& Helmreich, R. (1983). Achievement-related motives and behaviors. In J. T Spence (Ed.), *Achievement and achievement motives: Psychological and sociological approaches* (pp. 7-74). San Francisco: Freeman.

Sulaiman, A., & Mohezar, S. (2006, July/Aug.). Student success factors: Identifying key predictors. *Journal of Education for Business, 81*(6), 328-333.

Thompson, E. R., & Gui, Q. (2000, March/April). Hong Kong executive business students' motivations for pursuing an MBA. *Journal of Education for Business, 75*(4), 236-2.

Vallerand, R.J., Pelletier, L.G., Blais, M.R., Briere, N.M., Senecal, C., & Vallieres, E.F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement, 52*, 1003-1017.

WHO HAS THE MOST SKIN IN THE GAME?
A STAKE OWNER THEORY OF TENURE

M. Ray Grubbs, Millsaps College
Patrick A. Taylor, Millsaps College

ABSTRACT

Applying agency theory and a concept we call preferred economic interest to the governance of institutions of higher education, we propose a stake owners theory which holds tenured faculty members to be principals of the institution with administrators and trustees as their agents. Combining literature from management, economics, and public policy, this paper establishes the primacy of tenured faculty in the governance structure.

Keywords: *Academic tenure; higher education; governance; agency.*

INTRODUCTION

The institution of tenure in the academy is a long standing, widespread practice, though not universal. In the nearly century long existence of tenure systems, the true place in the institution of tenured faculty members has not been made clear. Though there is no doubt faculty who have earned (as opposed to granted) tenure are stakeholders, the exact nature of their stakes is not well defined. We propose a theory which casts tenured faculty members as super ordinate stakeholders, whom we call stake owners, whose stakes are a preferred economic interest which is superior to the status of all other stakeholders' interests. In other words, this stake confers a property right in the institution and is analogous in the for-profit sector to an employee who is also a stockholder, that person both an employee and part owner. Our theory leads to the conclusion that tenured faculty are in fact principals, whereas administrators and trustees are agents at institutions having tenure systems.

As long ago as 1936, Alchian recognized that not-for-profit colleges and universities are special kinds of organizations because they have neither owners nor clearly defined property rights (Alchian, 1977). When institutions have no clearly defined ownership, the identity of major stakeholders and their rights are unclear. We hope to help clarify the identification of rights of tenured faculty who have earned a preferred economic interest in the institution by virtue of their tenure.

Our argument is, once having earned tenure, faculty members are the group having characteristics of owners, residual claimants Brown, (1997) calls them. No other groups share these characteristics. Furthermore, because, unlike a share of stock in a corporation, tenure is

neither portable nor transferable, it is doubly important that tenure owners have a significant voice in institutional governance.

WHAT IS A STAKE?

Attas (2004) defines a stake as, ". . . a sum of money, or other valuable, wagered on an event." (p. 315). He continues, "The stakeholder is a person who has much to lose – financially, socially, or psychologically – from the failure of the firm." (Attas, pp. 315) Attas clearly links the value of a stake to the continued success of the organization. Furthermore, Attas stresses he is talking about long-term stakeholders and not those with transient, casual interactions with an organization. Tenured faculty clearly fit Attas' vision of a stakeholder, i.e., a stake owner.

Because it is not our purpose to review the vast stakeholder theory literature, we will simply refer those interested to the godfather of stakeholder theory, R. E. Freeman, (1984) who began the formal, academic treatment of stakeholder theory. Since Freeman, many veins of stakeholder theory have been deeply mined. For a succinct look at some of the relevant literature, see Post, Preston, and Sachs (2002), for a list of several others who have thought about stakeholder theory as it pertains to higher education.

As to our place in the literature, there is nothing in the scholarly literature overtly ranking the interests of stakeholders, certainly none making the assertion that tenured faculty have super ordinate status among stake holders. Some authors imply a ranking of stakeholder interests (Bess, 1988, Brown, 1997, McPherson and Shapiro, 1999, Trakman, 2008, and Fassin, 2009 for instance) but none makes the case for the primacy of tenured faculty. Therefore, our approach is unique in the scholarly literature of management and economics dealing with higher education issues. In fact, we found only one piece of work, Chapleo and Simms (2010), making a direct attempt to rank order the interests of stakeholders. However, they approach the question inductively using a survey instrument. Our approach is deductive in nature providing a theoretical foundation upon which to base our claim.

Before moving on, in the next section we define what owning tenure means. The third section builds the rationale upon which we base our claim that tenured faculty are an institution's primary stakeholders who hold an inalienable, preferred economic interest in the institution. Following that discussion, we build the case that tenured faculty are de facto principals in a college setting in which there are no clearly defined owners while administrators and trustees are their agents. The final section of paper sums up the work and suggests some of its implications for governance structures.

WHAT OWNING TENURE MEANS

The American Federation of Teachers (2006) defines academic tenure as protecting, ". . . the status, academic freedom and independent voice of scholars and teachers." (p. 4). As of the

1970 interpretation, the American Association of University Professors defines tenure as "permanent or continuous" (p. 4) and terminated only for cause or in the case of the institution's financial hardship (AAUP, 2006). However, both definitions of tenure leave open the question exactly what owning tenure means. No previous definition of tenure reveals what valuable thing accrues to a professor who has earned tenure.

Before seeking a definition of tenure, it is important to be mindful, as both the AFT and the AAUP make clear, tenure is earned and not awarded. It is important that a faculty member earns tenure only after a lengthy probationary period (typically six or seven years) and undergoing careful scrutiny by several informed, interested constituencies such as; departmental colleagues, divisional colleagues, divisional deans; tenure and promotion committees, institutional deans; presidents; and trustees (Watkins, 2009). Therefore, a faculty member earns tenure; it is not an award or gift granted through the beneficence of the institution. What then is the nature of the valuable asset tenure?

Coelho (1976) provides a succinct, independent (not affiliated with any professorate advocacy group) definition of tenure. He defines tenure as, ". . . a property right to a specific employment." (1976, p. 426). By logical extension, a property right to a specific job means a property right to a stream of future income. Even if tenure merely guarantees a specific position, the fact tenured faculty have a property right in a job means they are both legally and morally entitled to expect their employment will be protected. If tenure is to have any value, the institution must survive, if not thrive.

McPherson and Schapiro (1999) define tenure as, ". . . a set of constraints on the discretion of managers (the 'administration') over various aspects of the academic enterprise." (p. 92). Owning tenure, therefore, must mean the range of the institution's activities and choices over which tenured faculty should have oversight is broader than they are under the conventional, more limited theory of tenure. That range extends to holding administrators and trustees accountable for acting to protect the preferred economic interest tenure assures.

Though tenure grants something of value which is properly thought of as a property right in a particular job and its attendant stream of income for as long as the faculty member desires, there are limits. Limitations on tenure generally are associated with a faculty member's bad behavior or the institution encountering financial trouble. However, we largely dismiss the financial exigency case for withdrawing tenure.

Tenure's property right is inalienable, therefore, a declaration of financial exigency is not a valid reason to abrogate tenure. As the academy has moved closer to the corporate, strong president /weak board model of governance, the blame for an institution's financial distress falls at the feet of the president and trustees. When financial exigency is declared, it is the administration and trustees who are responsible for destroying the value of the stake owned by tenured faculty. Even if the institution is failing financially, tenured faculty must be compensated for the loss of the economic value of their tenure. The institution's contractual and moral obligation to protect the status of tenured faculty must mean administrators are obligated

to act so as to protect the preferred economic interests of tenured faculty. Tenure imposes a moral obligation upon the institution to give priority to the preferred economic interests of tenured faculty in their stake owner status. The costs of failure of administrators and trustees must not be visited upon tenured faculty members.

The not-for-profit status of many higher education institutions means there is no external market for ownership control, such as the stock market, to exercise restraint upon or monitoring of the behaviors of administrators and trustees (Brown, 1997). Brown concludes it falls to faculty to fill the role stockholders would fill in a corporation. They must be able to hold accountable both administrators and trustees to protect the preferred economic interest of tenured faculty who provide feedback to trustees on the performance of administrators.

Waxenberger and Spence (2003) imply claimholders (stake owners) have a moral claim to be key players in the governance structure of institutions of higher learning. Importantly they also note legitimate claimholders' power may not be commensurate with their moral position within the organization. Therefore, the problem an organization's governance system must solve is essentially the famous agency problem (Fama and Jensen, 1983 and John and Senbet, 1998, among others). More will be said below.

Faculty members are clearly employees of the institution. However, earning tenure draws a bright line of demarcation the crossing of which elevates a faculty member to a different class of stakeholders, stake owners. At that point, tenured faculty own what is analogous to an equity interest in the for-profit sector. In the corporate model of governance tenured faculty are generally treated merely as employees when they have a morally and legally defensible claim to a much greater voice in governance. When tenured faculty are treated as employees, they are on the short side of an informational asymmetry (Hill and Jones, 1992) that separates administrators and trustees from faculty.

To sum up what tenure means, it makes, ". . . a long-term, largely irreversible commitment to individuals that lock in . . ." (McPherson and Schapiro, p. 93). The phrase "lock in" means the institution is both legally and morally committed to protect the interests of the individual faculty member as those interests are reconciled with the interests of other stakeholders and the prospects of long-run survival of the institution. Following McPherson and Schapiro, therefore, tenure allocates to the faculty member ultimate authority over all decisions with implications for the survival (and prosperity) of the institution, in other words, most decisions.

One can find in the scholarly literature both supporters and opponents of tenure systems. We briefly call attention to some of the literature on both sides of the tenure issue. Support for tenure began to appear in the literature by at least 1964 with Machlup. Since then there has been a stream of articles in support of tenure which flows to the present with Kezar (2010) and Nelson (2010), to name two recent tenure supporters. Beginning at least with Alchian (1977) and continuing through Donoghue (2009) one finds objections to tenure systems. There are very

recent objections voiced by academics in the popular press by Vedder (2010), Taylor (2010) and Reardon (2011) as well.

In the final analysis, it is immaterial whether there is broad agreement upon the social value of tenure. The fact is many institutions voluntarily adopt tenure systems (McPherson and Schapiro). For institutions choosing to have a tenure system, once earned, tenure endows a property right making tenured faculty stake owners.

WHY TENURED FACULTY ARE STAKE OWNERS

As noted already, organizations have a moral responsibility to their stakeholders, the extent of which depends upon the importance of the each stakeholder (Harrison and Freeman, 1999; Attas, 2004; Waxenberger and Spence, 2003). Claims must be based upon the degree of congruence between what Waxenberger and Spence (2003) call the "value-orientation" (p. 246) of the organization. Tenured faculty are so obviously and irreplaceably tied to the value creation process of any college or university it needs no elaboration.

In addition to the moral imperative, there are five pillars upon which we build our case, upon which we elaborate next. First, tenured faculty have a legal claim to their positions. Second, tenured faculty are the primary risk takers (Clarkson, 1994 and Post, Preston, and Sachs, 2002). Third, faculty own the primary capital asset–their human capital (Hill and Jones, 1992). Fourth, tenured faculty are residual claimants (Brown, 1997). Fifth, tenured faculty members are the only group who are permanent parties of the institution. All of which leads us to conclude, uniquely so as far as we can determine, de facto tenured faculty are principals, whereas administrators and trustees are agents. If the institution is run by its administrators and trustees in such a way that the institution either losses value or fails completely, then tenure is worthless.

TENURED FACULTY HAVE A LEGAL CLAIM

At institutions which have chosen to have tenure systems, faculty employment contracts stipulate the availability of tenure and lay out the terms under which one may earn tenure. Therefore, once a faculty member has met those requirements, as affirmed by multiple constituencies, the institution is contractually bound to retain the faculty member and, we add, protect the value of their preferred economic interest for a period of time to be determined by the faculty member. Contracts are, of course, legally enforceable agreements. Therefore, tenured faculty have a legal claim upon the institution.

TENURED FACULTY ARE THE PRIMARY RISK TAKERS

Post, Preston, and Sachs (2002) define the essence of the quality of being a stakeholder as: "The stakeholders in a firm are individuals and constituencies that contribute, either

voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers." (p. 8).

Brown (1997) provides additional support for the claim tenured faculty are the primary risk takers when he writes, ". . . there must be a reasonable expectation that the firm will have the financial ability to pay the higher wages guaranteed in the future." (p. 452). In the event the institution fails, tenured faculty lose their jobs and the associated income stream, a property right in which tenure was supposed to have bestowed. If tenured faculty are the major risk takers, the institution must be operated in a way that provides the job and its associated claim upon residuals. Because of the residual claimant status of tenured faculty, Brown (1977) suggests ethics requires that tenured faculty be intimately involved in all material decisions regarding current resource allocations and future plans of the institution.

Of course, it is true non-tenured employees also bear the risk of losing their jobs if the institution is poorly run, or merely unfortunate. However, no other class of stakeholders owns the equity tenure confers. Hence, tenured faculty, and only they, have at risk both the job and the value of their property rights.

TENURED FACULTY OWN THE PRIMARY CAPITAL ASSET

It is self evident the human capital embodied in faculty members, tenured or not, is the major capital asset of all institutions of higher education. The physical and organizational structure of the institution is merely an economically efficient, organizational form for delivering education, in the Coase (1937) sense of minimizing transactions costs.

Faculty members, particularly long-standing ones who are most likely to have tenure, embody the most important capital asset any institution of higher education has which is their human capital. They also embody the mechanisms through which most alumni develop their affection for their alma maters. Alumni bonds to their college are built upon the relationships with professors developed during their student days.

Another way to characterize the human capital aspect of our argument is to apply "value logic" (du Plessis, 2008). What du Plessis means is tenured faculty do the heavy lifting in the production of value of any higher educational institution. Through their interaction with students, they along with their students are co-creators of the value of a higher education. Building relationships that foster learning requires considerable institution-specific investment by faculty.

Blair (1998) concludes stakeholders who have important institution-specific human capital investments at stake should capture the value of those investments through appropriate compensation schemes. She further says, ". . . governance systems should be devised to assign control rights, rewards, and responsibilities to the appropriate stakeholders – the parties that contribute specialized inputs." (p. 200). It will have to wait for another day to suggest how that might be achieved, however.

TENURED FACULTY ARE RESIDUAL CLAIMANTS

Brown (1997 and 2001) says explicitly, and others (McCormick and Meiners, 1988; Milgrom and Roberts, 1992; and Blair, 1998) suggest certain employees of any organization may have some of the traits of residual claimants. Brown (1997) makes that specific claim for tenured faculty members and he differentiates them from trustees. On that latter point Brown, echoing Coelho (1976), said, "Because the trustees of nonprofit firms do not have property rights to any residuals (profits) that the firm generates, unlike the trustees of profit oriented firms, they would be expected to invest relatively few resources in examining the actual operations of the not-for-profit firm." (1997, p. 421). Neither administrators nor trustees have such property rights; only tenured faculty have them.

Brown (1997) argues the residual claimant status of tenured faculty is a major reason for an institution to adopt a tenure system. He says, "A primary purpose of the academic employment relation is to provide the organization with a set of residual claimants." (p. 453). Though Brown was unique in his use of the term "residual claimant," others also at least imply tenured faculty are primary stakeholders, beginning with Freeman (1984).

In a private corporation, stockholders are residual claimants because they are owners of the firm. Tenured faculty occupy the same moral place as do owners of corporate stock and residual claimants. That status also means tenured faculty are also major risk takers, as we noted above.

TENURED FACULTY ARE THE ONLY PERMANENT PARTIES

Though it might be a smaller stone in the foundation of our argument, tenured faculty members are the only permanent parties in most higher education institutions. We know of no institution that offers tenure for administrative positions, per se. Trustees generally serve finite, defined terms of office, generally less than ten years at the longest (Kezar, 2006). Therefore, tenured faculty members are the only parties who remain a part of the institution for long periods of times, perhaps for entire careers. As such, tenured faculty are the group with the strongest incentives to work to see that the institution remains viable, if not thriving.

Students are somewhat of an exception. Even though they are the most temporary major stakeholders (as alumni they remain stakeholders but of lesser importance), while they are students, they must rank very high because helping them achieve their educational goals is the rasion d'etre of institutions of higher learning. Thus, students are hybrid stakeholders; they have some of the characteristics of owners and some of the characteristics of customers, who are also stakeholders, of course. Students, however, have no residual claims. Students are also hybrids from a production standpoint; they are both output, as educated citizens, and input, as a necessary resource in the process of becoming educated citizens.

To summarize this part of our case, all five of the facets of tenured faculty members noted above mean tenured faculty members have the strongest incentives to behave in ways they believe are most likely to perpetuate and prosper the institution. Presidents and trustees have lesser incentives to behave that way. In the worst case, administrators and, in particular, trustees may have perverse incentives, to extract as much personal benefits as possible as quickly as possible by maximizing their own utility functions, which are not likely to include the long-run success of the institution. In fact, none of the college charters at which we have looked ask anything of significance, or anything at all, of trustees by way of reporting to or being accountable to others. Governance systems based upon vague or absent definitions of property rights and responsibilities have the most serious implications for tenured faculty members as stake owners.

The discussion to this point leads us to conclude tenured faculty are principals, which makes hired administrators and volunteer trustees their agents. This is diametrically opposed to the implied, if not explicit, relationship between the institution and tenured faculty upon which most higher education institutions' governance systems are designed, the corporate model in particular. In that case, trustees cannot be counted upon to reign in the tendency for administrators to operate the institution in ways that maximize their own utilities. We amplify that point next.

ARE TENURED FACULTY PRINCIPALS AND ADMINISTRATORS AND BOARD MEMBERS AGENTS?

The principal-agent problem has been the subject of much scholarly attention in several disciplines including management, economics, and political science. All agree upon the definition of agency. See Ross (1973) or Jensen and Meckling (1976) among several others for formal definitions of principals, agents and the nature of the agency problem.

Principals are those who have an interest in some outcome but have incomplete ability to control events to reach the desired outcome and/or incomplete knowledge as to how to achieve desired outcomes. Agents are those who have the ability and knowledge to accomplish the principal's objectives and are retained by principals to reach those objectives. Informational asymmetry is the crux of the principal/agent relationship. It is the principal's job to set up incentives for the agent to act in ways that further the principal's interests. If tenured faculty are thought of as principals and administrators and board members as agents, for the most part, appropriate incentives are lacking in most current institutional governance systems. In those structures, administrators, CEOs, COO's, etc., make nearly all of the important decisions for the organization perhaps with little input from other employees or little effective oversight from board members.

Claiming stakeholders who are also employees are preeminent stakeholders is not entirely unique to us. Hill and Jones (1992) make a somewhat similar point in saying

management should act as agents for principals who are the primary stakeholders, though they are referring to private, for-profit firms. They call this notion "stakeholder-agency theory", which closely aligns with our concept of tenured faculty as stake owners.

Above we equate tenured faculty members to holders of corporate stock. Regarding the relationship between shareholders (stakeholders) and boards, Jensen and Meckling (1976) state that shareholders, as principals, choose board members whose job it is to monitor the performance of managers on behalf of shareholders. Therefore, correctly designed governance systems should make trustees formally accountable to tenured faculty in selecting administrators and trustees.

There may also be an issue regarding the respective attitudes toward risk of tenured faculty and administrators and board members. Eisenhardt (1989) calls attention to the potential for problems arising from differences in risk assessment between principals and their agents. She observes there may be differences in governance structures depending upon whether the principal-agent relationship falls in to Jensen's (1983) positivist or principal-agent version of agency theory. In the positivist sense, if principals and agents are likely to have conflicting agendas, then governance structures that contractually limit agent's self-serving activities are appropriate. As Eisenhardt also notes, just because it is possible to recognize goal conflicts between principals and agents, it is not necessarily easy to design appropriate contracts. Modern college governance systems generally have few, if any, contractual arrangements that limit the discretion of administrators and board members. This leaves exposed the preferred economic interests of tenured faculty members. In so far as that is true, such a governance structure is inappropriate.

As is widely known, in the principal-agent relationship the problem of moral hazard is an almost universal issue. Moral hazard, ". . . refers to a lack of effort on the part of the agent." (Eisenhardt,1989, p. 61). For our purpose, that means trustees and administrators may pursue their own utilities thereby causing the institution to underperform to the detriment of the value of the stakes owned by tenured faculty members. The usual culprit allowing agents to shirk is asymmetric information. Administrators and boards have more information about the institutions prospects and opportunities than do faculty. A great deal of administrators' and trustees' behaviors and the information underlying those behaviors are not revealed to faculty. This is a primary reason we believe conventional governance practices have it backward regarding who are principals and who are agents in higher education.

The essence of the agency problem is differing objectives of principals and agents. The two groups have different utility functions and seek different maximands. (Hill and Jones, 1992 among many others). In the case of colleges and universities there is no clearly identifiable maximand (Brown, 2001), in part because there are no clearly defined residual claimants.

One might argue, as Brown (1997) suggests, faculty are no more immune to the agency disease than are either board members or administrators. However, faculty are not agents; they are principals. The more closely the governance system aligns with the primary position of

tenured faculty as stake owners the larger the incentive tenured faculty have to be sure they and others are behaving in ways likely to advance the institution. Brown (1997) in fact, reaches much this same conclusion: he says, "The faculty as a group has little incentive to pursue educational goals that are not in the institution's long-run best interest since such decisions will ultimately reduce the faculty member's financial well being." (p. 456).

If tenured faculty are principals, it becomes necessary to evaluate governance systems against that standard. We conclude by considering some of the implications of that necessity.

CONCLUSIONS

It is important to distinguish between the governance function and the management function (Rhodes, 2001). It is possible for tenured faculty to be treated as stake owners in the governance system even with a relatively strong president so long as the president and trustees are mindful of their roles as agents representing the interests of tenured faculty. The essential ingredient is that the president and trustees are held responsible to tenured faculty for their performances.

Changes in governance systems must permit tenured faculty to more effectively monitor the performances of administrations and boards and wield real power in the organization. This is not a remotely revolutionary idea, except perhaps in higher education governance. In fact, it is the usual course of events in corporate governance, at least philosophically. Boards and managements serve at the pleasure of stockholders, who are major stakeholders in any corporation.

We are not arguing that full control of institutions of higher learning should be in the hands of tenured faculty. We recognized organizations cannot be effectively run on a day-to-day basis by committee, especially a committee of the whole. However, we are calling for tenured faculty to be involved in governance at a depth commensurate with their stake owner status. This does not mean that the interests of all other stakeholders should be ignored. It does mean, when there are conflicts, the interests of tenured faculty should be considered first because they are the heart of institutions mission and they embody the values of it (Pearce, Raymond and Zadek, 1996).

We further recognize, following Post, Preston, and Sachs (2002), producing higher education requires full, effective cooperation between all stakeholders and resource owners. As they suggest, managing the production process in such a way as to perpetuate, and presumably advance, the institution requires working inter-relationships among all stakeholders. Hence, a legitimate, workable governance system must endow administrators with sufficient authority and latitude to resolve inevitable conflicts over how best to allocate resources. Making presidents accountable to faculty, however, is not the same thing as faculty centric or collective management. The phrase "shared governance" is the term used to describe how this balancing

act is accomplished in academe. But in what proportions should governance be shared? That is the crucial question for governance design.

The institution of academic tenure is easily confused with a shared governance structure. Though the two are related, it is possible to imagine a system of institutional governance in which tenured faculty members are principals while administrators (agents) are given latitude to make many, particularly routine, decisions with considerable autonomy. We make this point because there is empirical evidence (McCormick and Meiners, 1988 and Brown, 2001 in particular) that universities with high levels of codetermination (meaning significant faculty participate in institutional governance) perform poorly compared to those institutions which are governed under the corporate model. In the process of making their case, however, McCormick and Meiners (1988) agree that all faculty are at least partial residual claimants. And, they note, professionals who are residual claimants perform better than professionals who are merely employees.

In golf, there is an expression to describe rounds upon which players have made a friendly wager. The expression is "having skin in the game". To be legitimate, governance systems must be consistent with the amount of skin major stakeholders have in the game. Trustees do not generally have any skin in the game. Administrators, and other employees, have considerable skin in the game, but are not stake owners. Tenured faculty, however, have in the game skin, muscle, sinew, bone, and blood. That makes them stake owners and therefore principals.

AUTHORS' NOTES

M. Ray Grubbs, Else School of Management, Millsaps College: Patrick A. Taylor, Else School of Management, Millsaps College.

REFERENCES

Alchian, A. A. (1977). "Private Property and the Relative Cost of Tenure". In Alchian, A. A. (Ed.) *Economic Forces at Work*, pp. 177-202. Indianapolis, IN: The Liberty Press.

American Federation of Teachers. (2006). "Shared Governance in Colleges and Universities," (Item No. 36-0696). Washington, D.C.

American Association of University Professors. (2006). 1940 Statement of Principles on Academic Freedom and Tenure with 1970 Interpretive Comments. Retrieved from http://www.aaup.org/NR/rdonlyres/EBB1B330-33D3-4A51-B534-CEE0C7A90DAB/0/ 1940StatementofPrinciplesonAcademicFreedomandTenure.pdf.

Attas, D. (2004). "A Moral Stakeholder Theory of the Firm," *Zeitschrift fur Wirtschafts und Unternehmensethik*, Vol. 5, No. 3, pp. 12-318.

Bess, J. L. (1988). *Collegiality and Bureaucracy in the Modern University: The Influence Of Information and Power on Decision-Making Structures*. New York, NY: Teachers College Press.

Blair, M. M. (1998). "For Whom Should Corporations Be Run? An Economic Rationale for Stakeholder Management." *Long Range Planning*, Vol. 31, No. 2, pp.195-200.

Brown, W. O. (1997). "University Governance and Academic Tenure: A Property Rights Explanation". *Journal of Institutional and Theoretical Economics*, Vol. 153, No. 3, pp. 441-461.

Brown, W. O. (2001). "Faculty Participation in University Governance and the Effects on University Performance," *Journal of Economic Behavior and Organization*, Vol. 44, No. 2, pp. 129-143.

Chapleo, C. and Simms, C. (2010). "Stakeholder Analysis in Higher Education: A case study of the University of Portsmouth," *Perspective,* Vol. 14, No. 1, pp. 12-20.

Clarkson, M. B. E. (1994). "A Risk Based Model of Stakeholder Theory". Proceedings of the Second Toronto Conference on Stakeholder Theory. Toronto, Centre for Corporate Social Performance and Ethics, University of Toronto.

Coase, R. H. (1937). "The Nature of the Firm," *Economica,* Vol.4, No. 16, pp. 386-405.

Coelho, P. R. P. (1976). "Rules, Authorities, and the Design of Not-for-Profit Firms," *Journal of Economic Issues*, Vol. 10, No. 2, pp. 415-428.

Donoghue, F. (2009). "Why Academic Tenure Doesn't Matter," *South Atlantic Quarterly,* Vol. 108, No. 4, pp. 601-621.

du Plessis, C. J.A. (2008), "Ethical Failure Under the Agency Logic: Grounding Governance Reform in a Logic of Value," *Group and Organization Management,* Vol. 33, No. 6, pp. 781-804.

Eisenhardt, K. M. (1989). "Agency Theory: An Assessment and Review," *Academy of Management Review*, Vol. 14, No. 1, No. 1, pp. 57-74.

Fama, E. and Jensen, M. (1983). "Agency Problems and Residual Claims," *Journal of Law and Economics,* Vol. 262, June, pp. 327-350.

Fassin, Y. (2009). "The Stakeholder Model Refined," *Journal of Business Ethics*, Vol. 84, No. 1, pp. 113- 135.

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach.* Boston, MA: Pitman.

Harrison, J. S. and Freeman, R. E. (1999). "Stakeholders, Social Responsibility, and Performance: Empirical Evidence and Theoretical Perspectives. *Academy of Management Journal*, Vol. 42, No. 5, pp. 479-485.

Hill, C. W. L. and Jones, T. (1992). "Stakeholder-Agency Theory," *Journal of Management Studies,* Vol. 29, No. 2, pp. 131-154.

Jensen, M. C. (1983). "Organization Theory and Methodology," *Accounting Review,* Vol. 58, No. 2, pp. 319-338.

Jensen, M. C. and Meckling, W. H. (1976). "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," *Journal of Financial Economics,* Vol. 3, No. 4, pp. 305-360.

John, K. and Senbet, L. W. (1998). "Corporate Governance and Board Effectiveness," *Journal of Banking and Finance,* Vol. 22, No. 4, pp. 371-404.

Kezar, A. (2006). "Rethinking Public Higher Education Governing Boards Performance: Results of a National Study of Governing Boards in the United States," *Journal of Higher Education,* Vol. 77, No. 6, pp. 968-1008.

Kezar, A. (2010). "No tenure, no nothing," New York Times Room for Debate: A Running Commentary on the News, "What If College Tenure Dies?" http://www.nytimes.com/roomfordebate/2010/07/19.

Machlup, F. (1964). "In Defense of Academic Tenure," *AAUP Bulletin,* Vol. 50, No. 2, pp. 112-124.

McCormick, R. E. and Meiners, R. (1988). "University Governance: A Property Rights Perspective," *Journal of Law and Economics,* Vol. 31, Oct., pp. 423-442.

McPherson, M. S. and Schapiro, M. O. (1999). "Tenure Issues in Higher Education," *Journal of Economic Perspectives,* Vol. 13, No. 1, pp. 85-98.

Milgrom, P. and Roberts, J. (1992). *Economics, Organization and Management.* Upper Saddle River, N.J.: Prentice Hall.

Nelson, C. (2010). "At stake: Freedom and learning," New York Times Room for Debate: A Running Commentary on the News, "What If College Tenure Dies?" Retrieved from http:// www.nytimes.com/roomfordebate/2010/07/19.

Pearce, J., Raymond, P., and Zadek, S. (1996). *Social Auditing for Small Organizations.* New Economics Foundation: London.

Post, J. E., Preston, L. E. and Sachs, S. (2002). "Managing the Extended Enterprise: The Stakeholder View," *California Management Review,* Vol. 45, No. 1, pp. 6- 28.

Reardon, J. (2011). "Tenure: An Obstacle to Change," *BizEd,* Vol. 10, No. 2, pp. 66-67.

Rhodes, F. F. H. (2001). *The Role of American Universities.* Ithaca, NY: Cornell University Press.

Ross, S. (1973). "The Economic Theory of Agency: The Principal's Problem," *American Economic Review,* Vol. 63, No. 2, pp. 134-139.

Taylor, M. C. (2010). "Unsustainable and Indefensible," New York Times Room for Debate: A Running Commentary on the News, "What If College Tenure Dies?" Retrieved from http://www.nytimes.com/roomfordebate/2010/07/19.

Trakman, L. (2008). "Modeling University Governance," *Higher Education Quarterly,* Vol. 62, Nos. 1&2, pp. 63-83.

Vedder, R. (2010). "Reducing Intellectual Diversity," New York Times Room for Debate: A Running Commentary on the News, "What If College Tenure Dies?" Retrieved from http://www.nytimes.com/roomfordebate/2010/07/19.

Watkins, E. (2009). "Academic Freedom/Academic market," *South Atlantic Quarterly,* Vol. 108, No. 4, pp. 781-796.

Waxenberger, B. and Spence, L. (2003). "Reinterpretation of a Metaphor: From Stakes to Claims". *Strategic Change,* Vol. 12, No. 5, pp. 239-249.

THE "NEW" SCHOOL LEADER: TRAINING INSTRUCTIONAL LEADERS FOR A NEW GENERATION OF TEACHERS AND LEARNERS

Ingrad Smith, Jackson State University
Clifton Addison, Jackson State University

"No one can say for certain how the schools of the new century will differ from those of the past century – but there can be little doubt that these schools will require different forms of leadership."

Elizabeth L. Hale and Hunter N. Moorman
Preparing School Principals: A National Perspective
on Policy and Program Innovations
Institute for Educational Leadership, 2003

ABSTRACT

As school district administrators labor to ascertain the qualities needed to lead schools in the 21st century, the task of designing principal training has taken countless methods and approaches. One school district made an intentional decision to develop a series of workshops for teachers enrolled in an educational leadership program with the specific objective that the results will be reflected in student achievement. The Instructional Leadership Institute was designed to explore and increase participants' level of awareness about the importance of analyzing and interpreting data to make more informed decisions about instructional improvement and curriculum alignment for their teachers as well as other fundamental elements of leadership training. While other school districts designate principals in a building first, and train them later, The Jackson Public School District chose to develop instructional leaders prior to being assigned to a school. These administrators will arrive in the building with the discipline, training and knowledge essential for 21st century school leadership.

INTRODUCTION

The new age of technology has created change at every level of education. Theories that formed the basis for training teachers are no longer relevant and themes that were germane to leadership preparation are no longer applicable. Consequently, teachers are in a quest for new ways to instruct technology age students, administrators are seeking new ways to lead teachers in an age of increasingly uncertain resource allocations, and district officers are looking for new ways to train instructional leaders for the 21st century. One school district created a leadership

institute specifically designed to train the kind of leader that will be successful in the district schools.   As leaders from the institute are placed in buildings together, the impact of their training will be triangulated.   Storey (2004) maintains that Fullan (2001) augured that the more complex society gets, the more sophisticated leadership must become.   Sergiovanni, (2001) provides a framework for the new type of leader. He asserts that leaders of the future will *not* be the superheroes of the past. They will *not* be the kind of leader who seeks to change things by sheer force of their bureaucratic authority. Instead, Sergiovanni affirms, leaders will spend much more of their time on purposing, developing idea structures for their schools, building a shared followership, and helping their schools become communities of responsibility.   Educational Leadership programs have been criticized in two major areas. According to Cunningham and Sherman (2008) they need contextual relevancy and leadership preparation lacks focus on instructional leadership, thus, the center of attention is not on student achievement.   Many scholars have suggested that field experience should be viewed as the primary vehicle for learning, with classroom work designed to support the learning that occurs in the field rather than vice versa (Browne-Ferrigno and Muth 2004; Daresh 2004; Ehrich, Hansford, and Tennet 2004; Cunningham 2007.) As the focus on instructional leadership shifts to the desire to create a new training format for leaders, investigation in the area provided research on the impact of administrators on student achievement. Researchers identified the following areas of emphasis for instructional leadership: asking tough questions ; setting high, but achievable, academic goals; maintaining orderly learning environments; encouraging teachers' beliefs in their students' abilities to achieve; modeling respect for hard work and academic achievement; setting a standard for friendliness and a commitment to all stakeholders; making supplies and instructional materials readily available; holding informal and formal conversations about school issues with stakeholders; recognizing and rewarding teacher efforts; creating opportunities for progressive professional growth; finding time to share information; supporting teachers' use of new skills; crating incentives for student learning; honoring students for accomplishments and good citizenship; acknowledging teacher professionalism; and creating professional learning communities. (Waters, Marzano, and McNulty 2003; Davis et al. 2005; Henderson et al. 2005; O'Donnell and White 2005; Hoy, Tarter, and Hoy 2006; Orr 2006.)

As one school district attempts to develop the "new leader", this bold new experiment will take years and several stages of development to achieve a measurable success in student achievement.   The study will follow the progress of the participants in the Instructional Leadership Institute in the Jackson Public School District as they take on the leadership challenges of a school district striving to make a difference in the complex educational environment of only being as good as your last year's test scores.   The purpose of this presentation is to examine the processes involved in developing a growth logic model, present a comprehensive analysis of participants' responses to the institute, and identify strategically designed activities for Instructional Leaders that will impact student success in designated schools.

OVERVIEW

The school district began with broad goals of equipping school principals with the tools and technical assistance needed to drive their schools to become high performing, significantly increasing the recruitment of qualified principals and assistant principals, and retaining highly qualified principals and assistant principals resulting in high expectations and high student achievement for all throughout the school district. While the project will provide professional development to individuals district-wide, efforts will be made to focus on eleven schools identified for improvement, corrective action, or restructuring. Based on the NISL model and encompassing the ISLLC standards for School Leaders, the Leadership Development Academy will address leadership development issues in five separate stages: Aspiring Leaders Academy, Junior Administrators' Academy, Novice Young Principals' Academy and District Administrators' Academy.

Objective 1 was to recruit, select, prepare, and support a trained pool of applicants from education or other fields for leadership positions within the high need areas of the school district while focusing on the needs of the schools identified for improvement, corrective action or restructuring. The Aspiring Leaders Academy will identify those persons whose abilities are well suited for leadership roles. The Junior Administrators' Academy will be organized to support and grow the district's current cadre of more than fifty assistant principals. The Novice/ Young Principals' Academy will address specific professional issues for success in leading their schools beyond this early, crucial period of their careers. The Veteran Principals' Academy will be based upon the need to provide continual professional growth for veteran school leaders. The District Administrators' Academy will additionally seek to develop district level leadership from within the ranks focusing on management of resources and coordination of support for multiple sites.

RESULTS

The Instructional Leadership Institute helped me to recognize the importance of analyzing and interpreting data to make informed decisions about instructional improvement and curriculum alignment
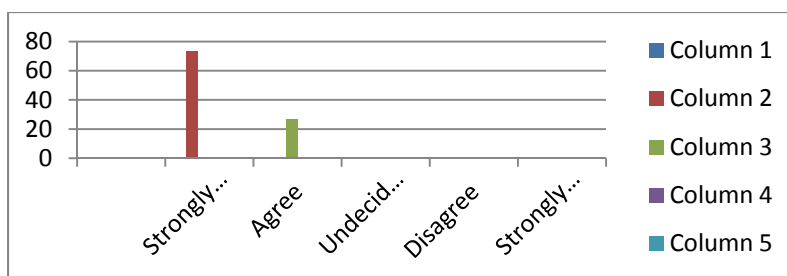
The Instructional Leadership Institute provided me with skills to analyze and interpret data to make informed decisions about instructional improvement and curriculum alignment
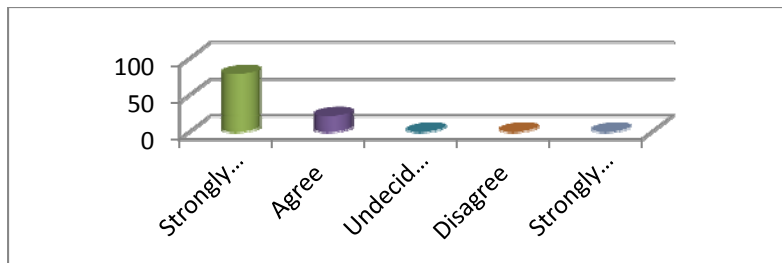
The Instructional Leadership Institute provided me with the skills to understand the Results Management Cycle
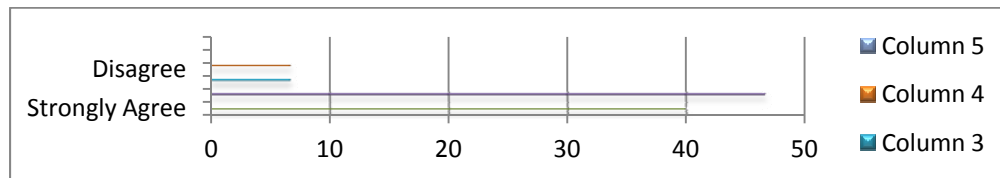
The Instructional Leadership Institute provided me with an understanding of how Standards-Based Instructional Systems represent a starting point for exploring the ways and means to achieve the ends of sustained improvement
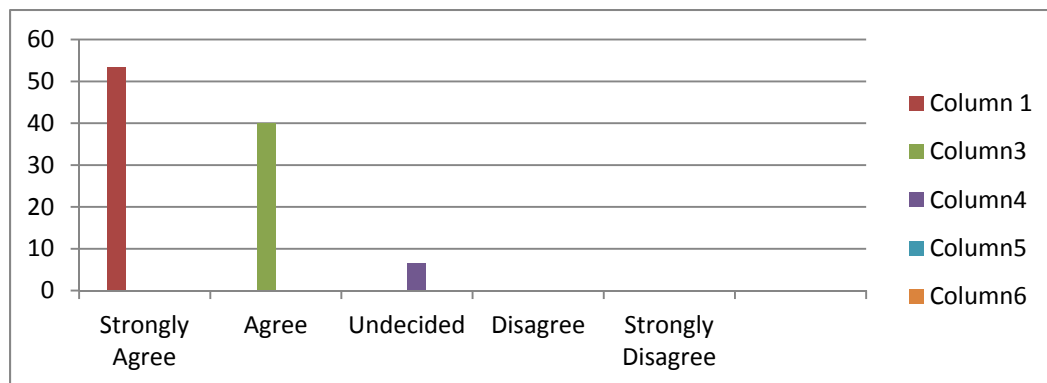
CONCLUSION

All sixteen participants were enrolled in or had completed a Master's degree in Educational Leadership. Most of the participants were teachers, 87.3%. The other participants were professional development coaches, 12.5%. There were more females (68.8%) than males (31.3%) enrolled in the study. Some of the participants had Specialist degrees (25%); others had doctorates (6.3%). Three ranges from 21-30 years of age, eight ranges from 31-40 years of age, four ranges from 41-50 years old, 1 was between 51-60 years old.

Data was collected using an online survey system. Participants responded to the survey after each session. Four questions related to their attitudes toward the training they received in the Leadership Institute were selected for discussion in this article.   This phase of the data is reported in percentages, statistical reporting will be presented at the end of the Leadership Institute. The majority agreed that the Leadership Institute had helped them to recognize the importance of analyzing and interpreting data to make informed decisions about instructional improvement and curriculum alignment, provided them with skills to analyze and interpret data to make informed decisions about instructional improvement and curriculum alignment, provided them with the skills to understand the Results Management Cycle, and provided them with an understanding of how Standards-Based Instructional Systems represent a starting point for exploring the ways and means to achieve the ends of sustained improvement.

ACKNOWLEDGEMENT

REFERENCES

Browne-Ferrigno, T., & Muth, R. (2004). Leadership mentoring in clinical practice: Role socialization, professional development, and capacity building. *Educational Administration Quarterly*, *40*(4), 468-494.

Cunningham, W. (2007). *A handbook for educational leadership interns: A right of passage...* Boston: Allyn & Bacon.

Cunningham, W. G., & Sherman, W. H. (2008). Effective Internships: Building Bridges between Theory and Practice. *The Educational Forum, 72*(4), 308

Daresh, J. (2004). Mentoring school leaders: Professional promise or predictable problems? *Educational Administration Quarterly*, *40*(4), 495-517.

Davis, S., Darling-Hammond, L., Lapointe, M., & Myerson, D. (2005). *School leadership study: Developing successful principals*. Stanford: Stanford Educational Leadership Institute.

Ehrich, L., Hansford, B., & Tennet, L. (2004). Formal mentoring program in education and other professions: A review of the literature. *Educational Administration Quarterly*, *40*(4), 518-40.

Fullan, M. (2001). *Leading in a Culture of Change*. San Francisco: Jossey-Bass.

Henderson, C., Buehler, A., Stein, W., Dalton, J., Robinson, T., & Anfara, Jr., V. (2005). Organizational health and student achievement in Tennessee middle schools. *NASSP Bulletin*, *89*(644), 54-75.

Hoy, W., Tarter, C., & Hoy, A. (2006). Academic optimism for schools: A force for student achievement. *American Educational Research Journal*, *43*(3), 425-446.

O'Donnell, R., & White, G. (2005). Within the accountability era: Principals' instructional leadership behaviors and student achievement. *NAASP Bulletin*, *89*(645), 56-71.

Orr, M. (2006). Innovative leadership preparation and effective leadership practices: Making a difference in school improvement. Stanford; Stanford Educational Leadership Institute.

Sergiovanni, T. (2001). Leadership: What's in it for schools? London: Routledge.

Storey, J. (Ed.). (2004). Leadership in organizations: Current issues and key trends. London: Routledge.

Waters, T., Marzano, R., & McNulty, B. (2003). *Balanced leadership: What 30 years of research tell us about the effect of leadership on student achievement?* Aurora: Mid-continent