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The Effect of Personality Characteristics on Business Students' Perceptions of Cheating

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ABSTRACT

Cheating is a common problem among college students. Research shows that business students cheat more often than other students and that this cheating was correlated with future unethical workplace behavior. The current study examines some psychological determinants of business students' cheating perception. A survey was administered to 474 undergraduate business students in two universities. The levels of Individualism/Collectivism and the Protestant Work Ethic were measured for each respondent as well as his/her perception of various questionable cheating actions. The results indicated that high Collectivists and those with a high Protestant Work Ethic were more likely to view cheating actions as more unethical than Individualists and those with a lower work ethic. The results have implications for college instructors in their attempt to reduce the likelihood of cheating.

College students' cheating is a widespread problem. Research shows that up to 70% of undergraduate students admitted to cheating at least once during their college years (Whitley 1998). Significant research has investigated the circumstances surrounding students' cheating as well as the demographic and psychological factors contributing to cheating.

The current study draws on the psychology literature and investigates if the personality characteristics of Individualism/Collectivism and the Protestant Work Ethic were related to students' perception of cheating. Using two multicultural universities in a large urban area, students' cultural dimensions of Individualism/Collectivism were measured. Individualism focuses on the maintenance of personal identity with the self being the basic unit of survival while Collectivism emphasizes a set of common beliefs and practices (Markus and Kitayana 1991). These cultural dimensions have been related to ethical perception in several studies. In addition, the Protestant Work Ethic measures the importance of hard work for each person and has also been found to correlate to ethical perception. The current study relates these two psychological dimensions to business students' cheating perception.

The remainder of the paper is organized as follows: the next section contains a literature review of business students' cheating as well as cultural dimensions and the Protestant Work Ethic. This is followed by an explanation of the research methodology and the results. Finally, conclusions are presented along with implications and suggestions for future research.

LITERATURE REVIEW

College Students and Cheating

Cheating in college is very common. Statistics regarding the frequency of cheating among college students range from 60% (Simkin and McLeod 2010) to 86% (Burton et al. 2011). Regardless of the percentage, it is clear that college students' cheating is a serious and common problem. In the last two decades, cheating has evolved from simply copying homework and exam answers to more sophisticated schemes involving texting and electronic plagiarism (Liebler 2012). In order to determine an appropriate strategy to minimize this problem, researchers have studied the factors that motivate students to cheat and the circumstances surrounding cheating. Demographic, situational and psychological factors have been found to determine the perception of cheating.

Several studies found that female students were less likely to cheat than male students (e.g. McCabe and Trevino (1997) and Williams et al. (2010). Tibbetts (1999) examined gender differences in cheating and concluded that females tended to feel more shame regarding cheating while males tended to exhibit less self-control. Age has also been an important determinant of cheating with younger students being more likely to cheat than older (nontraditional) students (Rawwas et al. 2004). Schuhmann et al. (2013) also found that the probability of cheating was positively related to lower GPA, alcohol consumption and having cheated in high school.

Research has also examined the situational circumstances surrounding cheating. Lau et al. (2011) noted that students tended to cheat more in major classes compared to non-major classes. In addition, students were more likely to cheat if they observed others cheating or perceived that it is commonplace (Genereux and McLeod 1995) and less likely to cheat if they were aware of the penalties involved, especially with gradable cheating such as cheating on homework and exams (Molnar and Kletke 2012). Students enrolled in an honor system university were less likely to cheat than others and were more likely to report cheating behavior (Schwartz et al. 2013). Overall, only 2.5% of students reported ever getting caught cheating during their college years (Diekhoff et al. 1996).

Significant research has examined psychological determinants of cheating. Simkin and McLeod (2010) compared cheaters and non-cheaters and found that "desire to get ahead" was the most motivating factor for cheaters while non-cheaters' presence of a "moral anchor" was the most important determining factor. Burton et al. (2011) found that more religious students were significantly less likely to engage in unethical test taking practices compared to nonreligious students. Bloodgood et al. (2010) examined the effect of Machiavellianism (i.e. the focus on one's self-interest) on students' likelihood of cheating. They found that students scoring higher on Machiavellianism were more accepting of cheating in general. The authors also examined the effect of taking an ethics course on cheating perception. They found that taking an ethics course did not affect cheating perception, especially among those scoring high on Machiavellianism.

Business Students and Cheating

Some studies have examined differences in cheating perception based on the student's major. The prevalence of corporate fraud scandals in the last decade has focused the public's attention to the possible relationship between business students' cheating and workplace cheating. Lau and Haug (2011) compared several majors' cheating perception in a mid-size university and found that English majors had the least tolerant attitudes toward cheating while business majors had the most tolerant attitudes. Similar results were achieved by Simha et al. (2012) who found that business students had more lax attitudes toward cheating compared to other students.

Previous research has considered academic dishonesty to be equivalent of business wrongdoing (Burton and Near 1995). They argued that cheating on a paper was the college equivalent of misreporting time worked. They also equated exchanging fake papers for higher grades with a business person exchanging forged reports for a promotion. Nonis and Swift (2001) confirmed this link and

found that college cheating was a predictor of workplace cheating. Due to the importance of this link, the current study examines cultural dimensions of Individualism/Collectivism and the Protestant Work Ethic as determinants of cheating perception. Demographic and situational variables are not examined in this study and are part of another ongoing study.

Individualism/Collectivism

Hofstede (1980) introduced the concept of Individualism/Collectivism as a cultural dimension that is unique to each individual in an ethnic group. It represents the relationship between an individual and his/her fellow individuals. Individualism stands for a society in which the ties between individuals are loose and everyone is expected to look after him/herself and his/her immediate family (Hofstede et al. 2010). Collectivism stands for a society in which people are integrated into strong, cohesive groups, which throughout a person's life tend to protect him/her in return for unquestioned loyalty (Hofstede et al. 2010). Chao and Moon (2005) noted that the Unites States has become more multicultural and therefore individuals exhibit a variety of cultural values reflecting their ethnic groups as well as the large dominant society.

Extensive research has been conducted on the consequences of these cultural dimensions on ethical perception with mixed results. For example, Smith (2009) showed that students in Marketing classes scoring higher on collectivism had an inclination toward less ethical behavior regarding plagiarism. Williams and Zinkin (2008) found that in countries with high Individualism ratings, the respondents were more likely to punish bad corporate behavior. On the other hand, Yoo and Donthu (2002) found that Collectivist Marketing students had higher Marketing ethics compared to Individualists. In addition, Swaidan (2012) also found that Collectivist consumers rejected questionable business practices more often than Individualists. Due to the conflicting results achieved by previous research, the current study tests the following hypothesis in the null form:

H1: There is no relationship between the cultural dimensions of Individualism/Collectivism and business students' ethical perception of questionable cheating actions.

Protestant Work Ethic

About a century ago, Max Weber introduced the concept of the Protestant Work Ethic. He proposed a relationship between the Protestant Work Ethic and the development of capitalism in western societies. Central to this thesis is the idea that wealth accumulation and economic success are a blessing from God. The validity of this the-

sis has been debated for the last century especially with the observation that economic success is more prevalent among Christian fundamentalists (e.g. Ghorpade et al. 2006). On the other hand, Becker and Woessmann (2009) concluded that religious beliefs were just a veil and that human capital formation and not Protestantism was the reason for economic success. The current study does not attempt to resolve the root causes or even the existence of a Protestant Work Ethic. Rather, it follows the approach used by Ghorpade et al. (2006) who argued that the Protestant Work Ethic represented the desire of people to work hard and place work at or near the center of their lives. Students who score high on the Protestant Work Ethic spent more time studying, achieved higher GPAs, and were less likely to engage in leisure activities on the weekend (Poulton and Ng 1988). Ghorpade et al. (2006) argued that this work ethic, although still called Protestant Work Ethic, is not unique to Western societies. Karakitapoglu et al. (2008) found that Turkish university students had higher scores on the Protestant Work Ethic compared to U.S. students.

Several studies have attempted to measure the effect of the Protestant Work Ethic on ethical perceptions. Furnham (1987) found that those who scored higher on the Protestant Work Ethic ranked responsibility higher in their values hierarchy than those who scored lower on the work ethic scale. Mudrack (1993) found evidence that business students who endorsed the Protestant Work Ethic were more critical of questionable business actions than those with weak scores on the work ethic scale. Jones et al. (2005) found that business students scoring higher on the Protestant Work Ethic had more negative perceptions of questionable organizational actions than students who scored lower on the scale. Based on previous research findings, the current hypothesis is tested:

H2: Business students who score higher on the Protestant Work Ethic scale would be more likely to view questionable cheating actions as unethical compared to those scoring lower.

RESEARCH METHODOLOGY

Sample Selection

The sample for this study consisted of undergraduate business students in two universities on the West Coast (One large public university and one medium private university). A survey was developed and administered in several classes containing a variety of business majors. After disregarding surveys with missing answers, the useable sample consisted of 474 students (333 in one university and 141 in the other one). The survey was completed during class

time and anonymity was guaranteed. A comparison of responses between students in both universities was conducted and no significant differences were found. Therefore, both samples were combined in future statistical analyses.

Scale Measures

In order to measure cheating actions, the scale developed by Rawwas et al. (2007) was used. In their study, they classified cheating actions into "clearly unethical actions" and "questionable actions". The current study uses only the seven statements representing questionable actions in order to avoid social desirability bias. If students perceived actions as clearly unethical, they would be quick to reject them. However, questionable actions such as "brown-nosing your professors to receive a higher grade" allow for a variety of perceptions and allow for a better measure of the study's variables. Each student reported his/her perception on a seven-point scale ranging from 1 (strongly ethical) to 7 (strongly unethical). Rawwas et al. (2007) found the reliability of these seven statements to be .65. In the current study, it was measured at .73.

In order to measure the cultural dimensions of Individualism/Collectivism, the scale developed by Triandis and Gelfand (1998) was used. They identified several dimensions of Individualism/Collectivism in horizontal and vertical orientations. Horizontal Individualists want to be self-reliant but are not necessarily interested in achieving higher status or comparing themselves to others. Vertical Individualists see themselves as independent and compete with others for status. Horizontal Collectivists experience a sense of community but do not like to yield to authority while Vertical Collectivists make personal sacrifices for the benefit of the group and are aware of their place in the hierarchy of the group (Vodosek 2009). The scale consisted of 12 statements (three for each factor) and respondents recorded their agreement with each statement on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Factor analysis was conducted in the current study and factor loadings ranged from .59 to .68 for all four factors of Individualism/Collectivism.

In order to measure the Protestant Work Ethic, the scale developed by Ghorpade et al. (2006) was used. Many studies have used the scale developed by Mirels and Garrett (1970). However, recent research (e.g. McHoskey 1994) has criticized the single-dimension nature of this scale. Ghorpade et al. (2006) modified the original Mirels and Garrett scale and developed an 11-item scale that yielded two factors: Success (measuring the desire to succeed and the importance placed on success) and Hard Work (measuring the enthusiasm for hard work and its importance) as well as a total Protestant Work Ethic score. Factor load-

ings achieved in the current study were .72 for success and .69 for hard work.

STUDY RESULTS

Table 1 presents means and standard deviations for all measured variables. In general, business students judged the questionable actions as slightly to moderately unethical. The results also revealed a large standard deviation indicating significant differences of opinions regarding these questionable actions. The results also revealed that students were neutral regarding the importance of success in life but slightly agreed that hard work was a moral commitment. Overall, they slightly agreed with the Protestant Work Ethic. Regarding the cultural dimensions of Individualism/Collectivism, the students scored higher on Horizontal Individualism compared to Vertical Individualism and higher on Vertical Collectivism compared to Horizontal Collectivism.

Table 1 also presents the results of statistically significant correlation results linking cheating perception and different variables. The results indicated a significant positive relationship between the dedication to hard work and the Protestant Work Ethic in general and the perception of cheating ethics. Students who felt that that hard work is a moral commitment and who scored higher on the Protestant Work Ethic were more likely to view questionable cheating actions as unethical. Therefore H2 was supported. Significant correlation also existed between the factors of the Protestant Work Ethic and the total score indicating the high inter-reliability of the scale.

There was also a significant negative relationship between Individualism and cheating perception and a significant positive relationship between Collectivism and cheating perception. Students who scored higher on Horizontal and Vertical Individualism were more likely to view questionable actions as ethical. Students who scored higher on Horizontal and Vertical Collectivism were more likely to view the cheating actions as unethical. Therefore H1 was rejected.

DISCUSSION AND IMPLICATIONS

The results generally indicate the importance of personality factors in the perception of cheating. Students generally attached more importance to hard work compared to success in life and generally had a modest work ethic. Instructors need to intensify their effort to increase students' work ethic. This work ethic will result in higher grades, a better education and a more productive future workforce. The results regarding Individualism/Collectivism and cheating perception are consistent with significant previous research who found that Collectivists view

ethics more positively than Individualists (e.g. Swaidan 2012). The current study does not recommend instructors to attempt changing Individualist students into Collectivists since culture dimensions are a function of many factors beyond the instructor's control such as family background, and society's norms, especially in multicultural societies. However, it is important for business instructors to be aware of the different ethical perception of Individualists and Collectivists and to emphasize classroom ethical actions to all students. Individualists could benefit from an in-depth discussion of the effect of cheating on other students and on society in general.

The current study examines only the perception of cheating and not actual cheating behavior. A student's decision to engage in cheating behavior begins with perception of cheating but is more complex than just a perception. The decision to cheat includes demographic, situational and opportunistic factors beyond cheating perception that are not measured in this study. However, they could be the subject of an interesting future study.

REFERENCES

Becker, S. O., and Woessmann, L. (2009). Was Weber Wrong? A Human Capital Theory of Protestant Economic History. *Quarterly Journal of Economics,* 124, 531-596.

Bloodgood, J. M., Turnley, W. H., and Mudrack, P. E. (2010). Ethics Instruction and the Perceived Acceptability of Cheating. *Journal of Business Ethics,* 95, 23-37.

Burton, B. K., and Near, J. (1995). Estimating The Incidence of Wrongdoing and Whistle-blowing: Results of a Study using Randomized Response Technique. *Journal of Business Ethics,* 14, 17-30.

Burton, J. H., Talpade, S. and Haynes, J. (2011). Religiosity and Test-taking Ethics among Business School Students. *Journal of Academic & Business Ethics,* 4, 1-8.

Chao, G. T., and Moon, H. (2005). The Cultural Mosaic: A Metatheory for Understanding the Complexity of Culture. *Journal of Applied Psychology,* 90, 1128-1140.

Diekhoff, G., LaBeff, E., Clark, R., Williams, L., Francis, B. and Haines, V. (1996). College Cheating: Ten Years Later. *Research in Higher Education,* 487-502.

Furnham, A. (1987). Work Related Beliefs and Human Values. *Personality and Individual Differences,* 8, 627-637.

Genereaux, R. L., and McLeod, B. A. (1995). Circumstances Surrounding Cheating: A Questionnaire

TABLE 1
DESCRIPTIVE STATISTICS AND
CORRELATION ANALYSIS

Panel A:
Descriptive Statistics (N=474)

	Mean (SD)	
Cheating Perception	5.35 (1.32)	
Success	4.78 (.92)	
Hard Work	5.37 (.93)	
Total Work Ethic	5.05 (.75)	
Horizontal Individualism	5.78 (1.06)	
Vertical Individualism	5.24 (1.14)	
Horizontal Collectivism	5.14 (1.03)	
Vertical Collectivism	5.78 (1.07)	

Panel B:
Correlation Analysis of Cheating and Work Ethic

	Success	Hard Work	Total Work Ethic
Cheating	...	.09**	.07*
Success	...	.31***	.84***
Hard Work	...	...	.77***

Panel C:
Correlation Analysis of Cheating and Culture

	Horizontal Individual	Vertical Individual	Horizontal Collective	Vertical Collective
Cheating				
Horizontal Individual	-.09*	-.15***	.10**	.07*
Vertical Individual	...	.31***	...	...
Horizontal Collective	...	...	.06*	.12***

Notes:

Cheating Scale: 1 (Strongly Ethical) and 7 (Strongly Unethical)
Other scales: 1 (Strongly disagree) and 7 (Strongly agree)
*** P<.01; ** P< .05 and * P<.10

Study of College Students. *Research in Higher Education,* 36(6), 687-698.

Ghorpade, J., Lackritz, and Singh, G. (2006). Correlates of the Protestant Work Ethic of Hard Work: Results from a Diverse Ethno-Religious Sample. *Journal of Applied Psychology,* 36, 2449-2473.

Hofstede, G., Hofstede, G. J., and Minkov, M. (2010). *Cultures and Organizations: Software of the Mind.* New York, NY: McGraw-Hill.

Hofstede, G. (1980). *Culture's Consequences.* Beverly Hills, CA: Sage Publications.

Jones, J. R., Christopher, A. N., Marek, P. and Reinhart, D. F. (2005). Students' Perceptions of Questionable Workplace Behaviors: The Effects of Perceiver and Actor Attributes. *Individual Differences Research,* 3(1), 14-26.

Karakitapoglu, A. Z., Arslan, M. and Guney, S. (2008). Work Values of Turkish and American University Students. *Journal of Business Ethics,* 80(2), 205-223.

Lau, L. K., Caracciolo, B., Roddenberry, S., and Scroggins, A. (2011). College Students' Perception of Ethics. *Journal of Academic & Business Ethics*, 5, 1-13.

Lau, L. K., and Haug, J. C. (2011). The Impact of Sex, College, Major, and Student Classification on Students' Perception of Ethics. *Mustang Journal of Business & Ethics,* 2, 92-105.

Liebler, R. (2012). Student Perceptions of Faculty Use of Cheating Deterrents. *Journal of Academic Ethics,* 10, 327-333.

Markus, H., and Kitayana, S. (1991). Culture and the Self: Implications for Cognition, Emotion and Motivation. *Psychological Review,* 98(2), 224-253.

McCabe, D. L., and Trevino, L. K. (1997). Individual and Contextual Influences on Academic Dishonesty: A Metacarpus Investigation. *Research in Higher Education,* 38, 379-396.

McHoskey, J. W. (1994). Factor Structure of the Protestant Work Ethic Scale. *Personality and Individual Differences*, 17, 49-52.

Mirels, H. L., and Garrett, J. B. (1970). The Protestant Ethic as a Personality Variable. *Journal of Consulting,* 36, 40-44.

Molnar, K. K., and Kletke, M. G. (2012). Does the Type of Cheating Influence Undergraduate Students' Perceptions of Cheating? *Journal of Academic Ethics,* 10, 201-212.

Mudrack, P. E. (1993). An Investigation into the Acceptability of Workplace Behaviors of a Dubious Ethical Nature. *Journal of Business Ethics,* 12, 517-524.

Nonis, S. A., and Swift, C. O. (2001). An Examination of the Relationship between Academic Dishonesty and Workplace Dishonesty: A Multicampus Investigation. *Journal of Education for Business*, 77(2), 69-77.

Poulton, R., and Ng, S. (1988). Relationship between Protestant Work Ethic and Work Effort in a Field Setting. *Applied Psychology: An International Review,* 37, 227-233.

Rawwas, M. Y. A., Al-Khatib, J. A., and Vitell, S. J. (2004). Academic Dishonesty: A Cross-Cultural Comparison of U.S. and Chinese Marketing Students. *Journal of Marketing Education,* 26(1), 89-100.

Rawwas, M., Swaidan, Z., and Isakson, H. (2007). A Comparative Study of Ethical Beliefs of Master of Business Administration Students in the United States with those in Hong Kong. *Journal of Education for Business*, 82(3), 146-158.

Schuhmann, P., Burrus, R., Barber, P., Graham, J., and Elikai, M. (2013). Using the Scenario Method to Analyze Cheating Behaviors. *Journal of Academic Ethics,* 11(1), 17-33.

Schwartz, B. M., Tatum, H. E., and Hageman, M. C. (2013). College Students' Perceptions of and Responses to Cheating at Traditional, Modified, and Non-Honor System Institutions. *Ethics & Behavior,* 23(6), 463-476.

Simha, A., Armstrong, J. P., and Albert, J. F. (2012). Who Leads and Who Lags? A Comparison of Cheating Attitudes and Behaviors among Leadership and Business Students. *Journal of Education for Business,* 87(6), 316-324.

Simkin, M. G., and McLeod, A. (2010). Why do College Students Cheat? *Journal of Business Ethics,* 94, 441-453.

Smith, B. (2009). Ethical Ideology and Cultural Orientation: Understanding the Individualized Ethical Inclinations of Marketing Students. *American Journal of Business Education,* 2(8), 27-36.

Swaidan, Z. (2012). Culture and Consumer Ethics. *Journal of Business Ethics,* 108, 201-213.

Tibbetts, S. G. (1999). Differences between Women and Men regarding Decisions to Commit Test Cheating. *Research in Higher Education,* 40, 323-342.

Triandis, H. C., and Gelfand, M. J. (1998). Convergent Measures of Horizontal and Vertical Individualism and Collectivism. *Journal of Personality and Social Psychology*, 74, 118-128.

Vodosek, M. (2009). The Relationship between Relational Models and Individualism and Collectivism: Evidence from Culturally Diverse Work Groups. *International Journal of Psychology*, 44, 120-128.

Whitley, B. (1998). Factors Associated with Cheating among College Students. *Research in Higher Education,* 39, 235-274.

Williams, G., and Zinkin, J. (2008). The Effect of Culture on Consumers' Willingness to Punish Irresponsible Corporate Behavior: Applying Hofstede's Typology to the Punishment Aspect of Corporate Social Responsibility. *Business Ethics: A European Review*, 17, 210-226.

Yoo, B., and Donthu, N. (2002). The Effects of Marketing Education and Individual Cultural Values on Marketing Ethics of Students. *Journal of Marketing Education*, 24, 92-103.

Adult Education Philosophy: The Case of Self-Directed Learning Strategies in Graduate Teaching

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ABSTRACT

This paper examines graduate students' perceptions of instruction of a professor who holds an adult education philosophy of self-directed learning (SDL). Students enrolled in three online courses (N=106) in the Fall of 2013 (n=56) and the Spring of 2014 (n=50) were asked to rank 10 of the professor's behaviors in the courses based on their level of comfort with the behavior. Additionally, the students were asked to provide narrative feedback regarding the behaviors. The results of the rankings and the feedback informed the professor as to the pros and cons of course behaviors consistent with a SDL learning (teaching) philosophy. The paper concludes with a discussion of possible resolutions to negative responses as well as suggestions for future research.

INTRODUCTION

Whether a professor is a novice or a seasoned veteran in the classroom, there is always room for improvement in the teaching and learning process. Sometimes the interest in improving our teaching is stirred by new technology that emerges, a new or more current textbook, a new-found passion for the field, or maybe even a few "bad" student evaluations. Whatever the reason for wishing to improve one's teaching, the possible weaknesses must be explored in order to address them. If one of the issues is the "course seems unorganized", the fix is as simple as including a detailed course schedule in the syllabus or preparing a weekly path to completion to post in the online course. However, if the issue at hand is the fundamental underpinning of one's teaching philosophy, the resolution of the issues is not so simple.

Having "the courage to teach" (Palmer, 1998) requires not only self-reflection, but also requires us to listen to those we teach. When this is done over a period of time, we begin to develop practices and behaviors in the classroom that work best for us and hopefully our students. More importantly, we start to develop teaching practices that are often aligned with and guided by our personal values, for example, personal responsibility and democracy. As a result, what emerges is a teaching philosophy that allows students to take control of their own learning and the freedom to learn what is important to them.

Through my graduate studies in adult education, I became fascinated with the idea of self-directed learning, I suppose because it described me. It felt good. I identified with it. I felt as though my life of good personal choices, achievement through self-determination and hard work was affirmed by the concept itself and ultimately the field of adult education. This is where my teaching philosophy of self-directed learning began.

With a teaching philosophy that requires students to take personal responsibility and make their own choices for the actual learning goals, comes some issues. Many students like freedom to make choices in a course regarding assignment options, selecting their own topics for papers, forming their own groups for group work and more. However, recently I have experienced some negative feedback on student evaluations saying things like "the course has no structure", "the professor is not present", or "the professor does not give detailed instructions". This is troubling when, at least from my perspective, I was showing respect for adult learners' needs to be autonomous, the constraints on their time due to family and other responsibilities, and their need to see what they are learning meets their individual learning needs. The purpose of this study is to examine the aspects of self-directed learning as a teaching philosophy that graduate students may perceive as a professor's weakness and then suggest how those issues can be resolved.

LITERATURE REVIEW

Self-Directed Learning

The definition of the concept of self-directed learning centers on one main idea, and that being that the student is the center of the learning process. Many scholars in the field of adult education have provided insight into this concept. Self-directed learning refers to any self-teaching projects in which the learner establishes his specific goal, decides how to achieve it, finds relevant resources, plans his strategies, and maintains his motivation to learn independently (Tough, 1967). Knowles's (1975) developed and defined the characteristics of self-directed learning as "a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes." (p. 18).

SDL is defined by Kumaravadivelu (2003) as learning in which making all the decisions related to learning are shouldered by the learner; however, main factors in implementing the decisions are necessarily given by authorities. Another definition of SDL is an approach to learning that relies on flexibility in time and place of learning and entrusts responsibilities of learning to the learner (Smedley, 2007).

Teaching Philosophy

One of the main tasks an educator is charged with is articulating their own education and/or teaching philosophy. Today, many employers require it as part of the application process and is a commonly included artifact in the professional dossier. Most novice educators will craft their philosophy from theories or iconic figures learned in their formal education. Since many doctoral students receive little instruction in actual college teaching (Jenkins, 2011), preparing a teaching philosophy may require reflection about one's own experiences as a learner. The veteran educator generally begins with this type of teaching philosophy and adjusts it over time. These adjustments to one's teaching philosophy are largely based on personal experiences and the best practices that may emerge in their specific teaching area.

There are many definitions in the literature regarding teaching philosophy. A teaching philosophy provides a conceptualization of a teacher's approach to teaching, establishing the foundation for articulating and clarifying teaching and learning beliefs, student learning goals, and personal development (Schönwetter, Sokal, Friesan,

& Taylor, 2002). Brookfield (1990) defined teaching philosophy as a personal vision. According to Zinn (as cited in Milheim, 2011) a teaching philosophy is much more than just teaching style, or a framework for a course. It can be defined as our beliefs about life that are carried out in our teaching practice, which serve as a foundation for our educational philosophies.

Since the author's teaching philosophy is based on the principles of self-directed learning-a pervasive concept in adult education, the need to describe various adult education philosophies exists. Arguably, the most comprehensive overview of adult education philosophies was given by Elias and Merriam (1995). These are as follows:

- Liberal Adult Education,
- Progressive Adult Education,
- Behaviorist Adult Education,
- Humanistic Adult Education, and
- Radical Adult Education.

This list of choices offers for the adult educator a guide as to their "position' regarding their approach to adult education.

Liberal

The purpose is to develop intellectual powers of the mind and to make a person literate. The learner is always a learner and seeks knowledge not just information. The teacher role is as the "expert" transmitter of knowledge and clearly directs the learning process.

Behaviorist

The purpose is to being about behavior that will ensure survival of the human species, societies, and individuals and to promote behavioral change. The learner takes an active role in learning, practicing new behavior and receiving feedback. The teacher role is as a manager, controller, and predicts and directs outcomes, designs the learning environment.

Progressive

The purpose is to transmit culture and societal structure and to promote social change, and to give the learner practical knowledge and problem solving skills. The learner's needs and interests are key. The role of the teacher is as an organizer, guides learning through experiences that are educative and evaluates the learning process.

Humanistic

The purpose is to develop people open to change and continued learning; to enhance personal growth and development and to facilitate self-actualization. The learner is highly motivated and self-directed and assumes responsibility for learning and self- development. The teacher is a facilitator, promotes, but does not direct learning, sets the mood for learning, and acts as a flexible resource for learning.

Radical

The purpose is to bring about fundamental changes to social, political, and economic changes in society through education. The learner is seen as equal with the teacher in the learning process, and has personal autonomy. The teacher is the provocateur and suggests but does not determine direction for learning.

To elaborate further, Table1 lists the source of authority and some teaching methods for each (Zinn, 1990).

Table 1		
Philosophy	**Source of Authority**	**Methods**
Liberal	Western canon	Dialectic; lecture; study groups; contemplation; critical reading and discussion.
Behaviorist	Environment	Programmed instruction; contract learning; teaching machines; computer-assisted instruction; practice and reinforcement.
Progressive	Situations the learner is in	Problem-solving; scientific method; activity method; experimental method; project method; inductive method.
Humanistic	Self/learner	Experiential; group tasks; group discussion; team teaching; self-directed learning; discovery method.
Radical	Societal imbalances	Dialog; problem-posing; maximum interaction; discussion groups

Of the five adult education philosophies, the one which best describes an educator with a teaching philosophy based on self-directed learning is the humanistic philosophy. The pressing issue for one with such a philosophy is how to translate it into the teaching and learning process and how self-directed learning principles can be translated into a teaching philosophy.

Self-Directed Learning as a Teaching Philosophy

Brockett & Hiemstra (1991) define self-direction in learning as both a behavior seen in instructional method processes (self- directed learning) and a personality characteristic of the individual learner (learner self-direction). They posit that components are embedded within a personal responsibility framework and operate within the learner's social environment contributing to the outcome of self-direction in learning.

Self-directed learning as an instructional method, as previously mentioned, like any method or pedagogy, is likely adopted based on the professor's personal values or preferences for instruction. This is where self-directed learning becomes a teaching philosophy. In essence, the development of or adoption of a certain philosophy is where the educator aligns who they are on the inside with what they do on the outside. Once this development has been set into motion, the educator then constructs the various strategies or pedagogies that support the philosophy.

A possible toolbox of teaching strategies that allow the student to be self-directed are as follows: individual and group presentations, role playing, situation simulations, service learning projects, student led group discussions and more. Bolhuis (1996) suggests that teachers who want to encourage self-directed learning must free themselves from a preoccupation with tracking and correcting errors, a practice that is ego-threatening (Guthrie, et al. 1996) and Bolhuis advocate greater tolerance of uncertainty and encourage risk-taking, and capitalizing on learners' strong points instead of focusing on weaknesses, as it is more beneficial for learners to achieve a few objectives of importance to them than it is to fulfill all the objectives that are important to the teacher. Leal (1993) advocates allowing learners to explore ideas through peer discussions–even without fully intact answers. This can be a process that can yield new and valuable insights. Corno (1992) suggests allowing learners to pursue personal interests without the threat of formal evaluation. Even if they make mistakes while doing so, the activities will sustain their interest, transcend frustration, and eventually break barriers to achievement. These are just a few strategies that can embody allowing students to be self-directed.

METHOD

Problem and Purpose

After two or three semesters of student evaluation scores which were at university and college expectations, but still less that I desired, I considered several factors that may be contributing to this result. I believed myself to be respectful and genuinely concerned for my students' success, I decided to step back and evaluate my teaching philosophy. The purpose of this study is to investigate my teaching effectiveness by asking students to respond to their feelings toward my teaching techniques.

Data Collection

Students enrolled in three online graduate courses (N=106) in the Fall of 2013 (n=56) and the Spring of 2014 (n=50) were asked to rank 10 of the professor's strategies in the courses based on their level of comfort with the behavior. Additionally, the students were asked to provide narrative feedback regarding the strategies. An online survey was emailed to students in each of the courses and student responses were recorded and analyzed. Ten teaching strategies based on self-directedness were listed and students were asked to rank the entire list in order with a rank of ten being "the most comfortable" and a rank of 1 being "the least comfortable". A blank textbox was provided for any additional comments or feedback the students wished to offer. The ten items students were asked to rank were: individual presentations, group presentations, role plays, student led discussions, choices of assignments, choosing my own paper topic, service learning projects, flexible due dates, self-evaluation on assignments, and self-paced assignments.

Results

The results of the rankings elucidate the teaching strategies that are likely not to be received well by students. The least comfortable strategy for students was the choice of paper topics with a mean score of 2.89 with student led discussions being comparable with a 3.0 mean score. The two most comfortable strategies for students are self-evaluation with a 7.5 mean and flexible due dates with a mean of 7.3. Table 2 illustrates the entire range of the ratings.

Figure 1 represents the ranking of each of the self-directed learning strategies, and the highest and lowest scores given by the students.

TABLE 2
Mean scores of the student rankings of teaching strategies

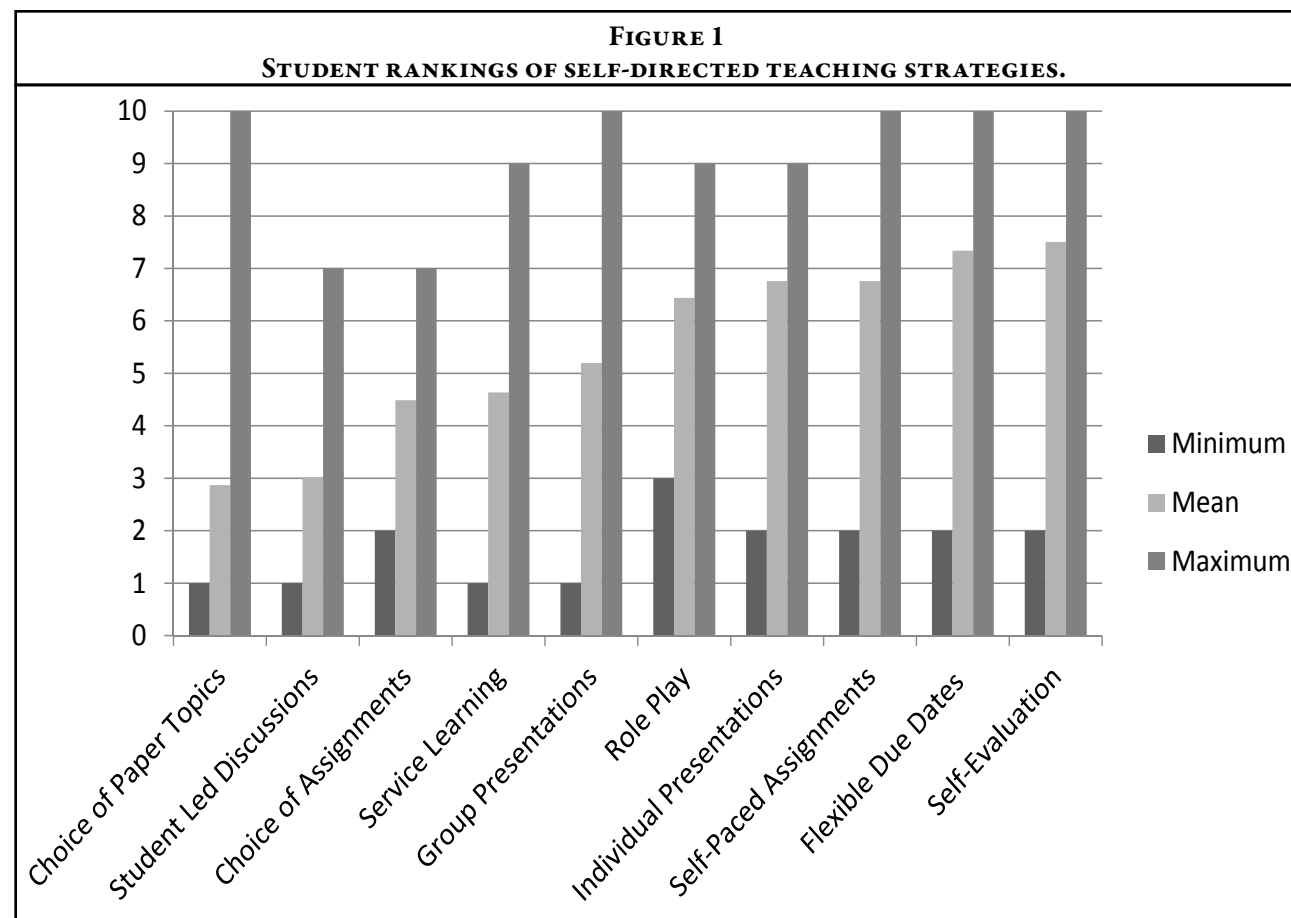| Strategy	Mean
Choice of Paper Topics	2.86
Student Led Discussions	3.01
Choice of Assignments	4.48
Service Learning	4.63
Group Presentations	5.19
Role Play	6.43
Individual Presentations	6.75
Self-Paced Assignments	6.75
Flexible Due Dates	7.33
Self-Evaluation	7.50

Discussion

Upon examination of these results, it is obvious that none of the strategies ranked above 7.5. This might indicate that students' comfort level with self-directed learning in general is not valued highly. The highest ranking strategy, self-evaluation, indicates students like being given back their work and determining for themselves where it can be improved. Flexible due dates rank high possibly because students can choose any day during the week in which to submit work. This fits into their busy adult lives and responsibilities.

It is apparent that students are not comfortable choosing their own paper topics and do not like leading the discussions for themselves. There may be many possible explanations for this. They may not want any possibility to exist for picking a topic that is not directly relative, or the teacher disapproves of. They do not like leading the discussions perhaps because they feel as though they glean more from the discussion when the teacher is directly involved.

This is supported by the following narrative responses (Table 3) to the highest and lowest ranked strategies in the survey:

The overall results of this investigation into my teaching philosophy caused me to really consider adjustments. It appears that students, even when are comfortable with certain self-directed strategies, are not overwhelmingly so. Also, given the narrative comments, it seems as though students need more direction and mistake the freedom given by the professor as a weakness, lack of engagement, lack of preparation, or lack of organization.

FIGURE 1
Student rankings of self-directed teaching strategies.

TABLE 3
Selected narrative feedback.

Strategy	Response
Self-Evaluation	"I like it when the professor gives back my assignment and asks me to think about how I can improve it. He lets us resubmit it instead of giving a bad grade which cannot be changed."
Flexible Due Dates	"I like being able to submit my work anytime during the week it is due. Sometimes when other things are going on, it makes life a lot easier."
Choice of Paper Topics	"I wish the professor would assign us a topic, or at least give a list of topics to choose from. When I am picking the topic, I worry that I will write a 10 page paper that will totally miss the mark".
Student Led Discussions	"The professor is not engaged in the discussions. I feel like most of what is said in the discussion is pointless. I want to hear what the teacher has to say."
General	1. "I feel that the teacher is unorganized and not prepared because we to decide all this for ourselves."
	2. "So much of the course is student-led, I feel that the teacher is not engaged in the course."
	3. "I feel like we are teaching ourselves. The teacher only gets involved if we are doing something wrong or when grading"
	4. "Not having consistent due dates throughout the semester make the course difficult to keep up with."

Recommendations

Many considerations must be taken into account when considering adopting a teaching strategy based on self-directed learning. First, it cannot be assumed that all adult learners are autonomous. Merriam, Caffarella, and Baumgartner (2007) cite Knowles as expressing, "in some situations, adults may need to be at least 'temporarily dependent' in learning situations" (p. 123). Second, a teaching philosophy should probably be based on various education philosophies so that learners are accommodated no matter what level of self-directedness they have achieved. Third, is important to articulate your teaching philosophy to your students in order to avoid misconceptions such as was my case. My teaching philosophy based on self-directedness left students feeling I was not engaged in or prepared for the courses.

Finally, one must consider ways in which shifting a teaching philosophy base on personal values and preferences can be accomplished while maintaining student confidence and professional competence. Future research should be conducted which examine educators' experiences, conflicts, and failures with their teaching philosophies so that we can better prepare future educators in developing a teaching philosophy.

REFERENCES

Bolhuis, S. (1996). Towards Active and Selfdirected Learning. Preparing for Lifelong Learning, with Reference to Dutch Secondary Education. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, April 8-12, 1996).

Brockett, R. G., & Hiemstra, R. (1991). Self-direction in adult learning: Perspectives on theory, research, and practice. London, England: Routledge.

Brookfield, S.D. (1990). The skillful teacher: On technique, trust, and responsiveness in the classroom. San Francisco: Jossey-Bass.

Corno, L. (1992). Encouraging students to take responsibility for learning and performance. *Elementary School Journal 93(1)* 69-83.

Guthrie, J.T., Solomon, A. & Rinehart, J.M. (1997). Engagement in Reading for Young Adolescents. *Journal of Adolescent & Adult Literacy 40(6)* 438-46.

Jenkins, R. (2011, September 20). A philosophy of teaching. The Chronicle of Higher Education. Retrieved from: http://chronicle.com/article/A-Philosophy-of-Teaching/129060/

Knowles, M. S. (1975). Self-directed learning: A guide for teachers and learners. New York, NY: Association Press.

Kumaravadivelu, B. (2003). Beyond methods: Macrostrategies for language teaching. New Haven, CT: Yale University Press.

Leal, D.J. (1993). The power of literary peer-group discussions: How children collaboratively negotiate meaning. *Reading Teacher 47*(2) 114-20.

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). Learning in adulthood (3rd ed.). San Francisco, CA: Jossey-Bass.

Milheim, K. L. (2011). The role of adult education philosophy in facilitating the online classroom. *Adult Learning, 22*(2), 24-31.

Palmer, P. J. (1998). The courage to teach: Exploring the inner landscape of a teacher's life. San Francisco, CA: Jossey-Bass.

Schönwetter, D. J., Sokal, L., Friesen, M., & Taylor K. L. (2002). Teaching philosophies reconsidered: A conceptual model for the development and evaluation of teaching philosophy statements. *The International Journal for Academic Development, 7*(1), 83-97. doi: 0.1080/13601440210156501. Retrieved from http://www.tandf.co.uk/journals

Smedley, A. (2007). The self-directed learning readiness of first year bachelor of nursing students. *Journal of Research in Nursing, 12*(4), 373-385. doi:10.1177/1744987107077532

Tough, A. M. (1967). Learning without a teacher: A study of tasks and assistance during adult self-teaching projects. Toronto, Canada: The Ontario Institute for Studies in Education.

Zinn, L. M. (1990). Identifying your philosophical orientation. In M.W. Galbraith (Ed.), Adult learning methods. (pp. 39-56). Malabar, FL: Krieger Publishing Company.

Zinn, L. M. (2004). Exploring your philosophical orientation. In M. W. Galbraith (Ed.), Adult Learning Methods: A Guide for Effective Instruction (3[suprd] ed.) (pp. 39-56). Malabar, FL: Krieger Publishing.

Should I Take More MIS Courses?
Implications from Interviews with Business Recruiters

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ABSTRACT

It is important for MIS educators to have a good understanding of what IT knowledge and skills are required in business. In this study, 103 open job positions in the Midwestern United States were investigated via semi-structured interviews with hiring companies. The interviews with key business recruiters suggest that IT knowledge and skills are significantly considered during the recruiting process, even if the target position is not IT-related. The most sought-after skills are summarized. Implications for MIS education and research are discussed.

INTRODUCTION

"Should I take more MIS courses?" Non-MIS business majors often ask the question when planning their course selections. As information technology (IT) increasingly saturates every corner of business operations, few people doubt the importance of IT knowledge and skills to one's career success. However, many students are daunted by the misperception that IT could be hard and boring (Beyer, 2008; Karsten and Schmidt, 2008; He and Freeman, 2010); others wonder the essential elements of IT knowledge that enable them to cope with today's competitive business environment.

IT knowledge and skills set the cognitive foundation upon which one can employ IT tools to solve business problems (Compeau and Higgins, 1995). Empirical studies provide strong evidence that IT-related abilities largely shape one's job performance. The exact makeup of IT knowledge and skills, however, remains unclear in the literature (Gregor, 2006). The vague understanding of IT knowledge and skills leads to the symbolic use of computers or computing applications as a proxy for assessing one's ability of utilizing IT in various situations. This proxy will inevitably restrict our research of IT influence in workplace from further advance.

This study attempts to advance our understanding of what IT knowledge and skills are required in business. Unlike previous research that focuses on the special knowledge requirements of IT workforce, the current study places attention on other business professions. Such an investigation will enrich our understanding of IT knowledge and skills beyond the boundary of the IT profession, provide important guidance to the development of IT curriculum for all business majors, and alleviate the often "significant disconnect between the realms of business and education" (LaFrance 2010; p. 25).

The paper proceeds as follows. First, previous efforts of studying IT knowledge and skills are reviewed, and a gap in our understanding of IT knowledge and skills required by other business professions is highlighted. Then, a research strategy is developed by using semi-structured interviews to analyze business expectations of IT skills especially in the job market of the Midwestern United States. Results of the interviews are summarized. The paper ends with a discussion of the implications of the results.

ReviEw Of The Research Literature

One major goal of MIS education is to provide students, both MIS majors and non-MIS majors, with IT knowledge and skills that will be needed for the success in their future careers (He and Freeman, 2010). Recently, understanding the makeup of IT knowledge and skills has received increasing attention among IS researchers. Research in the area provides important guidance to education, training, and career development.

There are two lines of research on IT knowledge and skills. One line of the research studies the effects of IT-re-

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Table 1
Review of the Research Literature on
Key Dimensions of IT Knowledge and Skills

Paper	Research Subject	Key Dimensions or Categories
Nelson 1991	IS and business professionals	• Organizational knowledge (knowledge of the organizational goals and objectives, key functions, and environmental factors) • Organizational skills (interpersonal, group, and project skills) • Organizational unit (knowledge of work unit objectives, problems, and links to others) • General IS knowledge (IS policies, main IS applications, privacy policies etc) • Technical skills (programming, database, etc) • IS product knowledge (specific applications being used)
Leitheiser 1992	IS managers	• Developer (interpersonal, analysis and design, programming, business, environment, programming language, specific application) • Specialist (database and data communication, software, hardware, advanced applications)
Lee et al 1995	IS managers, business managers, and IS consultants	• Technical specialties knowledge • Knowledge of technology management • Business functional knowledge • Interpersonal and management skills
Todd et al., 1995	Content of advertisements for IS professionals	• Technical skills (relating to hardware and software competence) • Business skills (industry and organizational knowledge, interpersonal, and communication skills) • System skills (analytical, modeling, and problem-solving skills).
Lee et al., 2002	IS professionals	• IS core knowledge • Organizational and society knowledge (specific functional areas, specific organizations, specific industries, and general environment) • Interpersonal (interpersonal behavior, interpersonal communication, international communication ability, teaching and training skills) • Personal traits (Personal motivation and ability to work independently, creative thinking, critical thinking)
Bassellier et al., 2001 and 2003	Business managers	IT competence components: • Explicit knowledge: technology, applications, system development, management of IT, access to IT knowledge • Tacit knowledge: experience and cognition
Bassellier and Benbasat, 2004	IT professionals	Business competence • Organization-specific (organizational overview, organizational units, organizational responsibility, IT-business integration) • Interpersonal and management (interpersonal communication, leadership, knowledge networking).
Cash et al., 2004	IS professionals	• Technical (hardware, system, application, and software knowledge) • Business (Organizational, business, and management-related competencies) • Relationship (interpersonal skills) • Conceptual (the ability of taking unrelated information and organize it in an ordered manner)
Gallivan et al., 2004	Classified job advertising for IT professionals	• Operating system skills • Programming language skills • Networks/communications skills • Software development tools • Non-technical skills (communication, interpersonal, leadership, organization, self-motivation, and creativity)
Litechy et al., 2004	IS hiring	• Technical skills (skills acquired through training and education or learned on the job and are specific to each work setting) • Soft skills (the cluster of personality traits, social graces, language skills, friendliness, and optimism that mark each one of us to varying degrees)
Simon et al., 2007	IT executives	• Technical • Project management • Business domain • Source • IT administration
Smith, 2008	Chief audit executives	Three categories of IT knowledge that are relevant for internal auditors • Basic IT knowledge needed by all professional auditors, focusing on computing concepts • Special knowledge needed by auditor supervisors for managing auditing process • Technical knowledge for IT audit specialists.
Lee and Mirchandani, 2010	IT managers	Dynamics of the importance of 17 sets of IT skills

lated abilities on job/task performance. Examples include perceived ease of use (Davis et al., 1989; Venkatesh, 2000; Venkatesh et al., 2003), computer self-efficacy (Compeau and Higgins, 1995), general and specific computer self-efficacy (Marakus et al., 1998, 2007), computer anxiety (Harrison and Rainer, 1992; Compeau et al., 1999), and personal innovativeness in IT (Thatcher and Perrewe, 2002). Through the development of IT behavioral theories and models, research in this line has established a strong linkage between one's IT-related abilities and his/her performance on job or on particular tasks.

Another line of the research studies the makeup of IT knowledge and skills that are required in the business world. This research originated with the seminal work of Ashenhurst (1972) in which important recommendations were given for IT curriculum development. Since then numerous attempts have been conducted to depict an overall pattern of IT knowledge and skills. Table 1 summarizes the recent work in this area.

As shown in Table 1, researchers have developed various IT-skill taxonomies, and there is no commonly-agreed upon theory to explain the makeup of IT knowledge and skills (Lee et al., 2002; Gregor, 2006). Two reasons may explain the phenomenon. First, the frequent changes in the technological environment require a constant adjustment of the relevance of key dimensions of IT knowledge and skills (Lee et al., 1995; Todd et al., 1995), making it "an impossible task" to produce a valid list of concrete computing skills (He and Freeman, 2010). Taking the recent ascension of E-Commerce as an example, "the implementation of e-commerce in an organisation has introduced three main business changes: changes in business expectations, in business perceptions, and in business compliance. These three changes ... have driven changes in the competency requirements of IS professionals (Cash et al., 2004; p. 62)." Secondly, IT is a diverse field consisting of a variety of domains, each of which has its own set of core knowledge. Coupled with the fast pace of technology development, it is hard to have a taxonomy that is both general enough to cover all the advancements and reasonably parsimonious for a meaningful interpretation.

In addition, prior research on IT knowledge and skills has emphasized the special knowledge requirements of IT workforce. Little attention has been paid to the basic IT skills that are essential for other business professions (the work of Smith (2008) is a rare exception). Given the fast pace of IT proliferation, we need to develop a better understanding of IT-related knowledge and skills that are required in the broad business world beyond the boundary of IT profession. For this purpose, we conduct the current research.

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Review Of The Prescriptive Literature

The research literature does not provide a convergent pattern of IT knowledge and skills required by the general business. We turned to the prescriptive literature[1] for such a pattern.

The most popular MIS textbooks were sampled to represent the prescriptive literature on the research topic. The premise is that MIS educators are striving to educate students for entering the job market with the ability to deal with today's business problems; thus, the MIS textbooks selected by most MIS educators well reflect the needs of the dynamic business environment as well as the competitive job market.

Twelve top-selling MIS textbooks at Amazon.com (as of March 31, 2013) were selected for review. These textbooks are designed for MIS introductory courses, where students come from various business majors. Content analysis was performed to identify book coverage. Since all these books have broad coverage of IT topics and concepts, we have narrowed our analysis to the main topic of each book chapter. For example, all books discuss to some extent supply chain management systems and customer relationship management systems, but only Valacich and Schneider (2010) single out the two types of systems as the main topics of two chapters. Thus, the two types of systems were coded as main topics for Valacich and Schneider (2010). We believe that this approach will lead to the most distinct pattern of coverage of these MIS textbooks. Table 2 summarizes the findings of the content analysis of the sampled books.

As presented in Table 2, the topic pattern of the sampled MIS textbooks is comparatively convergent and consistent. Although it has not been explicitly discussed in the literature, MIS educators have general agreement on the IT knowledge and skills that are important for business students. In addition, some textbooks provide training sessions, often in the form of extended learning module (e.g., Haag and Cummings 2009) or technological plug-in (e.g., Baltzan and Phillips 2009), for some popular applications such as Access, Excel, HTML, and/or MS Project. An open question is whether the coverage meets the requirements of today's business.

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[1] The term "prescriptive literature" refers to practitioner-oriented publications including methodologies, textbooks and handbooks (Kirsch and Beath 1996). In general, the prescriptive literature reports commonly-accepted practices or views in certain area of the industry.

Research Methods

The research intends to identify a general pattern of expected IT knowledge and skills in the job market under the assumption that business recruiters require certain IT qualifications for successful job candidates. To this end, we employed a qualitative research strategy with semi-structured interviews. Business recruiters that were able to make hiring decisions were sampled, semi-structured interviews were conducted with questions designed to explore the implicit IT requirements while allowing the emergence of new questions in order to fully understand a phenomenon that is complex, dynamic, and practical in nature.

Research Participants

Many private and public organizations located in the Midwestern United States with potential hiring in the near future were asked to participate in the study. These organizations all had internship or other collaboration programs with the researchers' university so that the chance of participation in the study was high. Each open position was treated as one case for the study of required IT knowledge of skills in business. Organizational background information was collected during interviews with key recruiters. In total, eighty-six organizations, representing 103 open positions, participated in the study. Profiles of the participating organizations are reported in Table 3 for company size and Table 4 for industry distribution.

Our sample is dominated by large companies (about 67%), followed by medium-sized companies (about 16%) and small companies (9%). Six organizations did not report the information about their business scale. Thus, results from the interviews should be interpreted with caution because the investigated positions are skewed toward hiring in large organizations.

As demonstrated in Table 4, 41 out of 86 (or 47%) participating organizations were in auto and other manufacturing areas with the rest evenly distributed over ten other industries. Such a pattern is consistent with the Midwest economy that emphasizes large scale manufacturing of finished medium to heavy consumer and industrial products. Thus, job openings from these organizations, while perhaps not representing a national pattern, provide important insights of IT knowledge requirements of the Midwest job market.

Data Collection and Analysis

Interview teams composed of MBA students (with an average work experience of six years) were trained to conduct semi-structured interviews. They then interviewed key recruiters in participating organizations. The following questions had been prepared for the interviews:

TABLE 2
MAIN TOPICS COVERED IN MIS TEXTBOOKS

Main Topics	Book											
	1	2	3	4	5	6	7	8	9	10	11	12
IT, Organization, and Strategy	X	X	X	X	X	X	X	X	X	X	X	X
IT Infrastructure	X	X		X	X	X		X			X	X
Computer Hardware and Software		X	X	X	X		X	X	X	X		
Database	X	X	X	X	X		X	X	X	X		
Telecommunications and Networks	X	X	X	X			X	X	X	X		X
Ethics	X	X		X	X	X	X		X			
Security	X	X	X	X			X	X	X	X		X
Decision Support Systems	X		X	X	X		X	X	X	X		X
Business Intelligence Systems	X		X		X	X		X	X		X	X
Enterprise Systems	X	X	X	X	X		X	X	X		X	
Supply Chain Management Systems											X	
Customer Relationship Management Systems											X	
System Development	X	X	X	X	X	X	X	X	X	X	X	X
Project Management	X	X			X	X						
E-Commerce	X		X	X	X		X	X	X		X	
E-Business		X		X	X		X			X		
Mobil-Business		X										X
Collaboration			X									
Access								X				
Excel								X				
MS Project												
HTML/Website Development								X			X	X

Notes:

1. "X" indicates main topics covered at the chapter level

2. Books reviewed:
   Book1: Laudon and Laudon (2011)'s *Management Information Systems* (12th Edition)
   Book2: Baltzan (2012)'s *Business Driven Information Systems* (3rd Edition)
   Book3: Kroenke (2010)'s *Using MIS* (4th Edtion)
   Book4: O'Brien and Marakas (2010)'s *Management Information System* (10th Edition)
   Book5: Laudon and Laudon (2012)'s *Essentials of MIS* (10th Edition)
   Book6: Pearlson and Saunders (2012)'s *Managing and Using Information Systems: A Strategic Approach* (5th Ed.)
   Book7: O'Brien and Marakas (2009)'s *Introduction to Information Systems* (15th Edition)
   Book8: Haag and Cummings (2009)'s *Management Information Systems for the Information Age* (8th Edition)
   Book9: Bidgoli (2011)'s *MIS2* (2nd Edition)
   Book10: Oz (2008)'s *Management Information Systems* (6th Edition)
   Book11: Valacich and Schneider (2010)'s Information Systems Today: Managing the Digital World (4th Ed.)
   Book12: McNurlin, Sprague, and Bui (2008)'s Information Systems Management in Practice (8th Edition)

3. The books sampled here are the top-selling MIS books at Amazon.com as checked on March 31, 2013. We acknowledge that the popularity of a book with a particular website is subject not only to the content of the book but also to factors such as price and the release of a new edition. However, we believe that the twelve sampled books as a whole represent the pattern of IT knowledge coverage in the MIS textbook market.

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1. Please describe the position that you are planning to recruit for, including the job description, the management level, and some primary tasks.

2. Please describe the qualifications (education background and professional experiences) that you expect for a successful job candidate.

3. Please describe the IT knowledge and skills that are expected for the position, and rank them in terms of importance.

Based on interviewees' responses, additional follow-on questions were asked. Examples of these questions include the influence of the current economic crisis on hiring, the demand and the supply of qualified candidates, and the expectations for business education. Each interview lasted 20-30 minutes. All interviews were noted and the transcripts were returned to interviewees for checking before analysis. Researchers jointly coded the interview transcripts for IT knowledge and skills that were required or expected by these business recruiters.

TABLE 3
COMPANY SIZES

Company Size	Count
Small	8
Medium	14
Large	58
Not Reported	6
Total	86

TABLE 4
INDUSTRY DISTRIBUTIONS

Industry	Count
Auto Industry	25
Manufacturing other than Auto	16
Finance and Banking	5
Marketing and Business Consulting	3
Retailing and Distribution	7
Telecommunication and IT	7
Healthcare	6
Energy and Environment	6
Education and Publication	3
Non-Profit Organizations	4
Military	2
Government	2
Total	86

FINDINGS

103 open position cases were collected via interviews with recruiters. The interviews have generated rich data about IT knowledge and skills required by different business professions. The breakdown of job categories is reported in Table 5. In each job category some representative positions are listed to illustrate the scope of the data sample. The comparatively high numbers of job opening in manufacturing, operation, and supply chain management reflect the regional economic structure of the Midwest[2].

TABLE 5
JOB CATEGORIES

Job Category	Representative Job Positions	Count
Accounting	Accountant, billing manager, tax consultant	6
Finance	Financial analyst, cost analyst, banking credit specialist	7
Marketing	Marketing manager, research analyst, group sales manager, sales representative	17
Human Resources	Recruiter, benefits analyst, HR project manager	5
Operation and Supply Chain Management	Operation manager, service engineer, project coordinator, material planner	19
Manufacturing	Engineer, product manager, work management specialist, assembly technician	27
IT	IT developer, database analyst, tech supporter	15
Office Administration	Portfolio analyst, management assistant, business assistant	7
Total		103

2 The United States Midwestern region has a strong sector of manufacturing. The employment statistics from the United States Department of Labor (http://www.bls.gov/sae/eetables/tabled1.pdf) shows that in January 2013 (the latest data when the manuscript was prepared), manufacturing took a significant share of nonfarm employment in the twelve states of Midwest, ranging from 6.0% in North Dakota to 16.9% in Indiana with a weighted average of 12.6%. Some sectors of nonfarm employment, such as government, education and health services, and leisure and hospitality, may not be appealing to business students as greatly as to students of other colleges. Combined with the research design of interviewing recruiters seeking business graduates, we conclude that the sample reasonably reflects the target job market for students of business schools in the US Midwest.

Table 6 reports the management levels of these positions. About 60% of the investigated positions were at the entry level, the rest were at the middle management level. Our sample does not include any senior level positions. Probably due to the sensitivity of senior-level positions to an organization's operation status and business strategy, the participating organizations were reluctant to release information about any senior-level position opening.

TABLE 6
POSITION LEVELS

Position Levels	Counts
Entry Level	62
Middle Management Level	41
Total	103

The authors carefully examined the content of the interview scripts, and coded the suggested IT knowledge and skills into different categories. The coding was guided by the knowledge pattern of MIS textbooks concluded in Table 2. The label of each category was modified based on the language used by the interviewed recruiters. For example, Enterprise Systems, Supply Chain Management Systems, and Customer Relationship Management Systems are discussed separately in many MIS textbooks. But most of the interviewed recruiters regarded these systems either as general ERP systems, or as specific enterprise application software such as SAP that their companies had implemented for managing major business operations. We therefore used the label of ERP/SAP for the requirement of knowing these systems.

There was little dispute between the coders regarding the categorization of IT knowledge/skills revealed in the interview scripts; however, a few discussions were conducted on how to label a category to better reflect the common views of the interviewed recruiters. Ten categories emerged from the coding process.

General Computing includes basic knowledge of computers, basic knowledge of Microsoft Office Suite, and using operating systems such as Windows. *Database* covers all database-related issues, including database development and management. It also includes using particular database software other than ERP and SAP. *Project Management* covers the skills of project management, time management, and multi-task management. *Communication via IT* includes the use of emails, PowerPoint, and electronic devices (e.g., mobile devices and teleconferencing) for oral and written communications. *Internet Knowledge* covers the knowledge of web surfing and search, website development and maintenance, and social media. *Networking* involves the use of network devices and software, such as FTP. *Excel* and *Word* were singled out because

most recruiters viewed them as stand-alone skills. Other categories are self explanatory. Such a coding scheme also matches the main knowledge areas identified in our review of the introductory MIS textbooks (Table 2).

Interview responses were analyzed in aggregation[3]. Table 7 reports the frequency of each IT skill being mentioned by the sampled business recruiters. Of the ten IT-skill categories, more than half of the recruiters had expressed expectations for database, general computing, Excel, and communication via IT, suggesting that questions about the four IT skills would very likely be asked in a job interview. In contrast, 15% and 13% of the sampled recruiters had mentioned programming and networking skills respectively; the chance of having questions of the two IT skills would be low in a general job interview.

TABLE 7
FREQUENCY RANKING OF IT SKILLS

Skills	Freq.	Possibility of Being Asked	Rank
Database	71	69%	1
General Computing	69	67%	2
Excel	57	55%	3
Communication via IT	57	55%	4
Project Management	43	42%	5
Word	36	35%	6
ERP/SAP	25	24%	7
Internet	23	22%	8
Programming	15	15%	9
Networking	13	13%	10

It may not be enough to know the possibility of an IT skill being asked in job interviews; candidates will be eager to learn the extent to which recruiters count the IT skill for judging one's job qualification. A balanced analysis of the relevance of an IT skill should take into account both the possibility of being asked and the perceived importance from recruiters. Such analysis is presented in Table 8, in which we calculate the product of frequency and perceived importance (the ranked importance provided by interviewees in response to the third interview question) as the weighted relevance for each IT skill. For an easy interpretation, the results are standardized by assigning the level of 100 to the most heavily weighted IT skill.

The pattern of Table 8 is similar to that of Table 7, with an exception that the rank of database skill drops from the first in frequency counts to the third in weights. This change suggests that the sampled recruiters were looking

3   Due to the limited sample size, we could not conduct a reliable break-down analysis at industry and job category levels.

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TABLE 8
WEIGHTED RANKING OF IT SKILLS

Skills	Weights	Rank
General Computing	100	1
Excel	89	2
Database	85	3
Communication via IT	84	4
Project Management	57	5
Word	54	6
ERP/SAP	34	7
Internet	25	8
Networking	18	9
Programming	18	10

for working knowledge rather than mastery of database from job candidates.

DISCUSSION

The importance of IT knowledge and skills to one's career success is widely accepted (He and Freeman, 2010). The study provides further evidence that one may not be able to start a career without knowing IT. All the sampled recruiters agreed that IT knowledge and skills should be significantly considered during the hiring process. One recruiter observed that "90% of what our engineers do is on computer." Another recruiter pointed out that "people with advanced technical skills seem to excel at the job." In a rare case, one recruiter admitted ignorance on the issue: "It's interesting how important these skills are to our work but honestly I've never thought about it before … I just assume that most people have IT skills and if they don't I assume they can be taught pretty easily."

Implications for Job Applicants

This study investigates today's IT requirements for job applicants. Findings of the study suggest that questions of database, general computing, Excel, and communication via IT are likely to be asked in job interviews. Often it is the answer of an IT-skill question that sets a job candidate apart from the large pool of applicants. One recruiter noted that most applicants had prepared well for common questions such as personal weakness and strength, but failed on Excel questions. She further commented that "a person who really knows Excel stands out of the crowd."

The importance of having database skills and project management skills needs further attention. The requirement of database skills reflects a reality in which business operations have been largely digitalized. For example, for

a marketing position, a recruiter described the primary tasks as dealing with "the input of customer orders, distribution of supplies, payment and collection dates, and databases housing their … data sheets." It is common in the workplace, remarked another recruiter, that "managers are constantly training themselves on … the company's proprietary applications and databases." In many cases, familiarity with Microsoft Access was mentioned as a proxy for one's knowledge of database. In a small company, the recruiter admitted that "knowledge in Access is crucial because this is the main database for established customer information here."

Having project management skills was required by 42% of the sampled recruiters for successful job candidates. Unlike the way we define project management in academic research, business recruiters interpret the term with broad meaning that covers the ability to schedule product deliveries, manage business processes, work under pressure, cope with multiple tasks, facilitate teamwork, motivate colleagues and keep good relationship with different management levels. This reflects the fact that many companies have adopted project-based team structures in the workplace. Such a broad and practical set of skills can hardly be assessed during a brief interview. However, most recruiters mentioned that experience with MS Project or similar project management software could be used as the indicator.

Less than 30% of the sampled recruiters mentioned ERP/SAP, Internet, programming, and networking skills in their expectations for successful candidates. This finding is contradictory to our original expectations. With many of the sampled companies being in the manufacturing sector, we predicted that specialist technical skills (Leitheiser 1992) such as ERP and networking would be required. An in-depth analysis of the interview transcripts suggests that this result should be taken with caution. We found that most recruiters would not ask questions about ERP/SAP when interviewing job candidates unless some integrated enterprise systems had been implemented in their organizations. For organizations where ERP/SAP was in the workplace, recruiters admitted that showing adequate knowledge of ERP/SAP would no doubt give a job candidate the edge; however, many of the recruiters also stated that training for the special integrated enterprise systems would be provided at work, therefore knowledge of ERP/SAP would not be a determining factor for them to make hiring decisions. Similar phenomena exist for programming and networking knowledge. As for Internet skills, we found that marketing positions asked for them most frequently. One recruiter remarked that "beyond that (of classical marketing knowledge) we need someone who understands websites, social networking sites, online marketing, etc." Thus, we conclude that in general the

technical knowledge and skills of ERP/SAP, Internet, programming, and networking are more of a differentiator rather than a requirement in the recruiting process.

Implications for Education

This study attempts to depict the overall IT requirements raised from the business world. The findings provide strong implications for MIS education. First, we should assure that our curriculum has a broad coverage of IT knowledge and skills that are highly expected by companies. Secondly, we need to understand that different business requires different IT skills. Broad knowledge of IT including general computing and communication via IT will help a student enter the competitive job market; mastery of particular applications such as Excel, MS project, ERP/SAP may help the student stand out from the crowd. The two aspects should be treated with balance in our curriculum.

Our review shows a certain level of consistency in terms of the foundation knowledge of IT among introductory MIS textbooks. However they differ in coverage of more specific applications. Findings of the study will help MIS authors develop textbooks that better meet industry requirements. For example, the introduction and exercise of certain applications, such as MS Access and MS Project, should be incorporated in the book. Students should be able to access more in-depth knowledge either by optional supplemental material or follow-up elective courses. The mastery of these particular applications will be recognized by business recruiters as valid indicators for meeting certain requirements. We do realize that with the rapid advance in IT and the ever-changing nature of IT profession, a regular update to the content of textbooks is needed.

Implications for Research

Although it is not our focus, the study provides implications for the research of IT influence in workplace. Current measures for one's IT-related abilities have focused largely on the use of computers and computing applications. Taking computer self-efficacy as an example, the concept is deemed an appropriate construct for understanding people's reactions to IT or IT-based applications (Marakas et al., 2007). Findings of the study suggest that a broader range of IT knowledge and skills are required in business. Narrowing our attention on the use of computers may limit the research in the future. This study provides guidelines for designing new measures of IT ability with dimensions that are relevant to current business reality.

LIMITATIONS

The study has several limitations. One is the geographical limitation of the sample population. In the study, participating organizations were selected from the Midwestern United States with cultural and economic characteristics that are different from other areas of the U.S. and other countries. From the point of view of employment, survey data from the US Department of Labor, as illustrated in Figure 9, suggests that the job market of Midwest differs from that of other regions notably in the sector of manufacturing. Thus, the research findings should be interpreted with caution.

Note: The statistics was calculated based on the employment survey data of January 2013 from the United States Department of Labor

In the study, participating firms were selected from local organizations that had internship or other collaboration

TABLE 9
EMPLOYMENT PATTERN BASED ON THE
US DEPARTMENT OF LABOR SURVEY DATA

	Northeast	South	Midwest	West
Construction	3.4%	4.6%	3.6%	4.5%
Manufacturing	7.5%	7.7%	12.6%	7.8%
Trade, transportation, and utilities	18.5%	19.3%	19.2%	18.9%
Financial activities	6.7%	5.5%	5.8%	5.5%
Professional and business services	13.5%	13.4%	12.5%	14.2%
Education and health services	19.6%	14.1%	15.7%	13.2%
Leisure and hospitality	9.2%	10.4%	9.2%	11.7%
Other services (except public administration)	6.6%	7.3%	6.0%	6.9%
Government	15.0%	17.7%	15.4%	17.3%
Total	100.0%	100.0%	100.0%	100.0%

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programs with the researchers' university. This approach resulted in high level of participation. However, the data was not a random dataset, which may limit the generalizability of our findings. On the other hand, such a sampling frame targets firms and job openings that are believed to be relevant and appealing to business students. However, other less-favorable job areas, such as low-pay operational level clerks, are largely ignored. The small sample size may raise another concern. In the study, data were collected from interviews with 86 business recruiters on 103 job openings. The limited sample size allows the data to be analyzed only in aggregation. Future research that incorporates larger sample sizes will allow other in-depth investigations such as break-down analysis at industry and job category levels. Results from such research will help design special IT education programs tailored for different majors and career requirements.

CONCLUSION

Understanding IT-related knowledge and skills for different business occupations "is especially important for IS academics since it directly influences what we teach our students" (Cash et al 2004, p. 60). This study is another endeavor to enrich our understanding of IT knowledge and skills with special interests in the requirements of non-IT business professions.

Semi-structured interviews were conducted with 86 hiring companies in the Midwest United Sates. Questions were centered on the required or preferred IT knowledge and skills for a target position. Data from a total of 103 job openings were collected. Recruiters widely agreed that IT knowledge and skills should be significantly considered during the hiring process. Ten categories of IT skills were identified from the interviews. These IT skills are ranked in terms of frequency, perceived importance, and their relevance to the business.

Today, the proliferation of IT imposes strong requirements of IT knowledge and skills on business professionals across all occupations. Thus, we need to deliver IT knowledge and skills in an efficient and effective way to help our students gain an edge in the competitive job market, and eventually achieve success in their future career. However, our curriculum, such as the one recommended by the Association for Computing Machinery and the Association for Information Systems (Topi et al., 2010), focuses on students who major in MIS; the special needs of non-MIS majors are not well addressed. As MIS educators, it is a challenge as well as our responsibility to make appropriate adjustments in the MIS curriculum. We should encourage our students to take MIS courses, deliver IT knowledge and skills that are relevant to business,

and prepare our students for the challenge of IT-enabled global economy.

We hope the study will help MIS educators convince students of the importance of learning IT, and guide the selection of MIS courses regardless of their majors. Indeed, the necessity of increasing MIS education does not come from IS educators; rather, business recruiters are speaking out with their raised expectations of advanced IT skills for job candidates.

REFERENCE

Ashenhurst, R.R. (1972) "Curriculum recommendations for graduate professional programs in information systems," *Communications of the ACM*, 15, 5, pp. 363-398.

Baltzan, P. (2012) *Business Driven Information Systems*, 3rd Edition, McGraw-Hill/Irwin.

Baltzan, P., and Phillips, A. (2009) *Business Driven Technology*, 4th Edition, McGraw-Hill/Irwin.

Bassellier, G. and Benbasat, I. (2004) "Business competence of information technology professionals: Conceptual development and influence on IT-business partnerships," *MIS Quarterly*, 28, 4, pp. 673-694.

Bassellier, G., Benbasat, I., and Reich, B. (2003) "The Influence of Business Managers' IT Competence on Championing IT", *Information Systems Research*, 14, 4, pp. 317-336.

Bassellier, G., Reich, B., and Benbasat, I., (2001) "Information Technology Competence of Business Managers: A Definition and Research Model", *Journal of Management Information Systems*, 17, 4, pp. 159-182.

Bidgoli, H. (2011)'s *MIS2*, 2nd Edition, Course Technology.

Cash, E., Yoong, P., and Huff, S. (2004) "The impact of e-commerce on the role of IS professionals," *The DATA BASE for Advances in Information Systems*, 35, 3, pp. 50-63.

Compeau, D. R. and Higgins, C.A. (1995) "Computer self-efficacy: Development of a measure and initial test," *MIS Quarterly*, 19, 2, pp. 189-211.

Compeau, D.R., Higgins, C.A., and Huff, S. (1999) "Social cognitive theory and individual reactions to computing technology: A longitudinal study," *MIS Quarterly*, 23, 2, pp. 145-158.

Davis, F.D. (1989) "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Quarterly*, 13, 3, pp. 318-340.

Davis, F.D., Bagozzi, R.P., and Warshwa, P.R. (1989) "User acceptance of computer technology: A comparison of two theoretical models," *Management Science*, 35, 8, pp. 982-1003.

Gallivan, M. J., Truex III, D. P., and Kvasny, L. (2004) "Changing patterns in IT skill sets 1988–2003: A content analysis of classified advertising," *The DATA BASE for Advances in Information Systems*, 35, 3, pp. 64–87.

Gregor, S. (2006) "The nature of theory in information systems," *MIS Quarterly*, 30, 3, pp. 611-642.

Haag, S., and Cummings, M. (2009) *Management Information Systems for the Information Age*, 8th Edition, McGraw-Hill/Irwin.

Harrison, A.W., and Rainer Jr., R.K. (1992) "The influence of individual differences on skill in end-user computing," *Journal of Management Information Systems*, 9, 1, pp. 93-111.

He, J., and Freeman, L. (2010) "Understanding the formation of general computer self-efficacy," *Communications of the Association for Information Systems*, 26, 12, pp. 225-244.

Kirsch, L.J., and Beath, C.M. (1996) "The enactments and consequences of token, shared, and compliant participation in information systems development," *Accounting, Management & Information Technology*, 6, 4, pp. 221-254.

Kroenke, D.M. (2010) *Using MIS*, 4th Edition, Prentice Hall.

LaFrance. G. (2010) "Bridging the IT skills gap through industry and academic collaboration," *Employment Relations Today*, 36, pp. 25-30.

Laudon, K., and Laudon, J. (2011) *Management Information Systems*, 12th Edition, Prentice Hall.

Laudon, K., and Laudon, J. (2012) *Essentials of MIS*, 10th Edition, Prentice Hall.

Lee, D.M.S., Trauth, E.M., and Farwell, D. (1995) "Critical skills and knowledge requirements of IS professionals: A joint academic/industry investigation," *MIS Quarterly*, 19, 3, pp. 313–340.

Lee, K., and Mirchandani, M. (2010) "Dynamics of the importance of IS/IT skills," *The Journal of Computer Information Systems*, 50, 4, pp. 67-78.

Lee, S., Koh, S., Yen, D., and Tang, H.-L. (2002) "Perception gaps between IS academics and IS practitioners: An exploratory study," *Information & Management*, 40, 1, pp. 51-61.

Leitheiser, R.L. (1992) "MIS skills for the 1990s: A survey of MIS managers' perceptions," *Journal of Management Information Systems*, 9, 1, pp. 69-91.

Marakas, G.M., Johnson, R.D. and Clay, P.F. (2007) "The evolving nature of the computer self-efficacy construct: An empirical investigation of measurement construction, validity, reliability and stability over time," *Journal of the Association for Information Systems*, 8, 1, pp. 15-46.

McNurlin, B.C., Sprague, R., and Bui, T. (2008) *Information Systems Management in Practice*, 8th Edition, Prentice Hall.

Nelson, R.R. (1991) "Educational needs as perceived by IS and end-user personnel: A survey of knowledge and skill requirements," *MIS Quarterly*, 15, 4, pp. 502–525.

O'Brien, J.A., and Marakas, G. (2010) *Management Information System*, 10th Edition, Irwin/McGraw-Hill.

Oz, E. (2008) *Management Information Systems*, 6th Edition, Course Technology.

Pearlson, K.E., and Saunders, C.S. (2012) *Managing and Using Information Systems: A Strategic Approach*, 5th Edition, Wiley

Simon, J.C., and Kaiser, K.M., Beath, C., Goles, T., and Gallagher, K. (2007) "Information technology workforce skills: Does size matter?" *Information Systems Management*, 24, 4, pp. 345-359.

Thatcher, J.B., and Perrese, P.L. (2002) "An empirical examination of individual traits as antecedents to computer anxiety and computer self-efficacy," *MIS Quarterly*, 26, 4, pp. 381-396.

Todd, P.A., McKeen, J.D., and Gallupe, R.B. (1995) "The evolution of IS job skills: A content analysis of IS job advertisements from 1970 to 1990," *MIS Quarterly*, 19, 1, pp. 1-27.

Topi, H, Valacich, J.S., Wright, R.T., Kaiser, K.M., Nunamaker, J.F. Jr., Sipior, J.C., and de Vreede, G.J. (2010) "IS 2010 curriculum guidelines for undergraduate degree programs in information systems," *Association for Computing Machinery*, http://www.acm.org/education/curricula/IS%202010%20ACM%20final.pdf (current July 27, 2013).

"Employees on nonfarm payrolls by state and major industry, seasonally adjusted" (2013) United States Department of Labor, http://www.bls.gov/sae/eetables/tableod1.pdf (current March 31, 2013).

Valacich, J., and Schneider, C. (2010) *Information Systems Today: Managing the Digital World*, 4th Edition, Prentice Hall.

Venkatesh, V. (2000) "Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model," *Information Systems Research*, 11, 4, pp. 342-365.

Venkatesh, V., Morris, M.G., Davis, G.B., and Davis, F.D. (2003) "User acceptance of information technology: Toward a unified view," *MIS Quarterly*, 27, 3, pp. 425-478.

Service Learning Projects in Online Courses: Delivery Strategies

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ABSTRACT

As more college courses are taught online, maintaining course deliverables and learning to mirror face-to-face offerings is important to faculty, students, and accrediting agencies. Offering experiential and service learning is an increasingly important way to connect students to their local communities. This article presents a case study implementation of a service learning project in a hybrid (taught partially online) senior-level business seminar, which is moving to a fully online format. The format pairs business students with existing community partners that have defined projects and tasks for volunteers. Delivery strategies to engage students in civic and social organizations are presented along with benefits to students and to the community. Strategies for including college students in volunteer projects as an initial service learning experience are included. Areas for future research are also presented.

INTRODUCTION

Online learning is a rapidly growing pedagogical reality in higher education. Yet the learning delivery is often criticized for its lack of real-world connections. Many face-to-face classes overcome these weaknesses through service learning projects. However, the service learning pedagogy should not be limited to face-to-face instruction only. This paper integrate the benefits of service learning, an effective classroom teaching style that relies on interactive learning and integration of classroom activities and efforts into communities, with the ever increasing online environment. The study examines a case within a hybrid (partially online) environment, focusing on business students using functional business knowledge within the community. Additionally, this paper provides suggestions for implementation within an online course.

SERVICE LEARNING

The seminal definition of service-learning (Bringle & Hatcher, 1995, p. 112) is a "course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility." Service learning is further defined by Weiler et. al. (2013) as "a pedagogical strategy for promoting the development of civic-mindedness among university students" (p. 236). Universities are adopting service learning as a pedagogical strategy for a number of reasons, particularly to develop socially-responsible knowledge and values for their students and to produce civic minded alumni (Reeb, 2010; Bringle & Steinberg 2010). While additional research is needed on

the community-impact of service learning projects, a goal is to engage students in projects to fill a community-identified need (Reeb & Folger, 2013)

Service Learning in the Classroom

The service learning pedagogy integrates experiential learning through assigned community projects requiring structured reflection to benefit both students and the community (Glenn, 2002). By providing opportunities for students to work with community partners, students become prepared to participate in society. Further, service learning allows educators to connect classrooms to the world beyond the campus (Giles & Eyler, 1994) and creates an ethical base for learning (Coye, 1997).

Becker, et. al. (1991) argue within learning theory, higher levels of understanding require active involvement in application and use of concepts Service learning is a method to make the on-campus or online classroom an active experience, and to appeal to students' interests by making course material more relevant. Applied learning offers opportunities for repetition and reinforcement of concepts already studied, thereby increasing the likelihood of retention (McKeachie, 1999). Students enjoy real examples relevant to the business environment where they will be working (Buckles, 1999) and develop a greater appreciation for the relevance of concepts, and as a result the motivation to learn may be enhanced (Bonwell & Eison, 1991). As students become involved in service learning projects, a sense of community on campus develops which improves retention, recruitment, and future involvement in other projects (Lucy-Bouler & Lucy-Bouler, 2012). College students are introduced to service learning through participation in short-term experiences (McCarthy, 1996) providing a balance of challenge and support along with possible future participation in community service experiences with long-term outcomes and activate deep learning (Grauerholz, 2001).

Benefits of Service Learning

Service learning provides opportunities and benefits for students, faculty, community, and the academic institution (Warner, Glissmeyer, and Gu, 2012). Service-learning focuses on "how-to" and restores a link between citizenship and service that has historically been a concern of educational systems (Staples & Ornatowski, 1997) by providing "real world" experience component, thus enriching the classroom experience and making the course content relevant to the student (Brown, Cox & Watts, 2010). The integration of student's learning into the community benefits the society as a whole by utilizing student or human capital produced by the academic institutions.

Working with community resources can include a wide variety of organizations addressing area problems, including homeless shelters, after school programs (Big Brothers/Big Sisters, Junior Achievement), urban planning groups (City Councils, County Commissions), or abuse centers (Family and Children's Services, Crisis Center, Community Kitchen) and other public or private agencies. The Service Learning Center at the academic institution or a similar outreach department should take the initiative to make contacts with community agencies to identify their needs and build ties to the curriculum by introducing the service learning concept and projects in appropriate fields of study. A variety of benefits of service learning have been found for student participants both immediately and after they graduate. By providing opportunities for students to work with community partners, institutions help them become "ideal orators" (Quintilian, 1988).

Further benefits have been found in a study of service learning and leadership. Sabbaghi, Cavanagh, & Hipskind (2013) found student leadership dimensions of persuasion, building, community, commitment to the growth of people, stewardship, empathy, awareness, foresight, and listening increased after participation in a financial literacy service-learning project. In addition students' interest in social justice increased. The authors believed the students were better prepared to be ethical leaders and compassionate citizens after completing the project.

Similarly Caro et. al. (2013) cited pressure for business students to be prepared to enter organizations and understand quality leadership motivated their inclusion of a service learning project into a leadership seminar. In a nursing program at the junior-level students were found to make connections between theory and practice as they learned concepts from patient-centered care to evidence-based practice (Flinders, 2013). Experiential learning through service learning builds on personal growth and understanding. By bringing students outside of the classroom and into the community, students are allowed to give back and build a connection with their communities (Eisenhard & Ninassi, 2010).

Hansen (1999) states students develop important skills, helping them function more effectively in the labor market or in graduate school, even through those skills are not always measured by exam scores and often not even in overall course grades. Studies suggest an effective teaching style provides a classroom environment enabling students to apply learning to real life situations (Elzinga, 2001). Then when confronted with real life problems, students can apply their analytical thinking to comprehend and resolve them. Service learning provides the channel for applied learning.

Engaging students in the community for active learning is the motivation of most service learning projects. Johnson (2013) believes service learning provides students with relevance demanded from the business community. Her students in a graduate research methods class worked in teams to conduct a situation analysis for a local non-profit organization in an experiential learning project. Service learning offers students the opportunity to develop a number of competencies or skills such as team building, leadership, conflict resolution, communication, organization, and time-management (Olney, Livingston, Fisch, & Talamantes, 2006). Calvert and Kurji (2012) explored the impact of a service learning project in a managerial accounting course. Their motivation was the criticism of business schools producing graduates that lack teamwork and communication skills. They proposed a service learning methodology to improve these skills in accounting students.

PROLIFERATION IN ONLINE COURSE DELIVERY

Kolowich (2014) reported online education went mainstream many years ago. Academic leaders continue to forecast more pervasiveness of online courses in the future. Recent data from the Babson Survey Research Group indicated some 7.1 million students take at least one online course to complete their education. Bolkan (2013) reports the number of college students taking a minimum of one online course rose from 23 percent in 2009 to 45 percent in 2013, citing the 2013 College Explorer report surveying over 1,500 students.

Online learning is revolutionizing the way higher education is delivered to students. Professors are required to successfully adapt coursework to a new learning environment, while being conscious of factors such as communication, active and collaborative learning, and reflective practices (Gresh & Mrozowski, 2000). Students and the institutions also play a key role in online success. Students must shift their learning paradigms to maximize knowledge acquisition and institutions must broaden their vision to explore innovative methods of utilizing the online learning channel of instruction. Online courses too are tasked with being equivalent to the in-class experiences and many regional (i.e. SACS) and program-specific accreditation agencies (i.e. AACSB, NCATE) require separate assessments on online, hybrid, and face-to-face learning to assure they are equivalent in meeting course objectives and learning experiences for students.

SERVICE LEARNING IN ONLINE COURSES

Khan and Hill (2013) promote integrating industry-sponsored projects into online courses, particularly capstone courses, citing a growing need for such inclusion. Further, the design of service learning or industry/client-sponsored projects can be incorporated into any program at any institution (Kahn & Hill, 2013). Incorporating service learning pedagogy maintains an interactive environment in online courses. Sservice learning projects can encompass various activities, depending on demographics, size of the economy, the locality, the college affiliations or community involvement, the student population, and class size. Studies conclude successful online instructors realize building a sense of "community" is necessary for successful learning outcomes (Kazmer, 2000; McLellan, 1999). Developing a community "becomes a parallel stream to the content being explored" in online courses (Palloff & Pratt, 1999).

IMPLEMENTING ONLINE SERVICE LEARNING: A CASE STUDY

The four components of the service learning pedagogy—preparation, action, reflection and evaluation—are adapted to online environments. Regardless of the length of the online course, students are introduced to the project in the course syllabus and receive a project orientation and description outlining expectations and project due dates.

Implementing service learning is a popular activity in a number of capstone senior-level courses regardless of discipline. For example, Hagan (2012) utilized client projects in an undergraduate marketing and public relations capstone class. Students applied their discipline based knowledge while working collaboratively, also using their 'soft' skills. However, in an online modality, such experiential service learning projects for clients can be more challenging (Hagan, 2012).

As an in depth case, students in an AACSB accredited business program in a SACS accredited college in the Southeast United States participated in a service learning requirement as part of their Senior Seminar course. The course is a pass/fail graduation requirement of all business students in their last semester, currently being taught as a hybrid (partially delivered online) course. Currently, required seminars compose the face-to-face component of the hybrid course. However, as the school incorporates more online classes with a completely online Bachelor of Applied Science (BAS) degree, Senior Seminar will be converted to video using Camtasia® software. Additionally synchronous online webinars will be provided to accommodate distance learning students who cannot attend on

campus seminars. The focus of the course is preparation for the world of work and targets job search strategies, interviewing, networking, and human relation skills in addition to reinforcing business/discipline-based knowledge and critical/analytical thinking.

To enhance job search skills, students are required to attend seminars on professional dress, interviewing skills, resume and cover letter writing, participation in an etiquette module followed by an etiquette dinner and developing professional profiles on social media sites (e.g. LinkedIn). In addition, students are required to write a cover letter and develop a resume for a job within their major later used in a mock interview. The mock interviews are conducted by local business executives, typically at the executive's workplace. To enhance networking and human relation skills, students are required to participate in a service learning project to benefit a local social or civic organization. A list of approved service activities is provided. The opportunities available provide an array of volunteer opportunities to accommodate most schedules so that students need not take time away from their work (almost all the seniors were working at least part-time).

In preparing for the Senior Seminar course, the preliminary step was to identify community stakeholders. While several civic groups were partners of the School of Business, to increase the population, the professors used social media to poll current students and alumni for additional examples. Together they identified national and international organizations with a presence in all locations represented by students in the hybrid class. These included: Chamber of Commerce, Rotary International, Kiwanis Clubs, Lion's Club, AARP, Ruritan, Sertoma, the American Legion, Exchange Club, and the Optimists Club.

Four partners, shown in the table above are available to students in our ten-county service area of about a 100 mile radius. Students are allowed to propose other service opportunities that meeting stated requirements (i.e. benefit the community, utilize discipline-based knowledge and skills, have available work to meet the minimum of 10 hours of service, etc.). This is particularly helpful for online students, allowing them to contribute to their communities.

In the syllabus, students are given the list of the service learning partners, including a short write-up explaining the organization and outlining the types of volunteer activities and duties available. Students are asked in an online survey to indicate their major and top preferences. The professors use this to assign service learning projects. Students are provided with the contact information for the organization and director. Students schedule their volunteer training schedule for the project. The service learning partners are also given a list of students and are aware the students will be contacting them.

Following the completion of their service learning projects, students are required to post comments about their experiences, including reflections on the business knowledge and skills they used, what they learned from the experience, and suggestions for improvements or modifications. This provides opportunities for instructors to observe and further guide the lessons learned from the students' service experience in subsequent lectures, postings, and online discussions. The reflection process connects the classroom learning with the experience and allows students to think about their achievements from service learning and evaluate their contributions to the community.

SENIOR SEMINAR SERVICE LEARNING PARTNERS		
Organization	**Meeting Date/Times**	**Learning Outcomes**
Girl Scouts	Saturdays	Teams, International Policy, Event planning and organizing
VITA – Volunteer Income Tax Assistance	Spring Semesters on Fridays/ Saturdays	Accounting, Customer Service, Organization, Process Flow
Junior Achievement	JA in a Day; one hour a week for five weeks in K-12 schools; and weekend entrepreneurship programs	Finance, Economics, Management and Entrepreneurship
Alzheimer's Association	Saturday Events-- spring "Dancing with local Star" and fall 5K run as well as weekday work in the office	Planning, Organizing, and Marketing

Student's volunteer activities are assessed by the supervisor in the respective community agency in an online, www.surveymonkey.com survey, developed by the university faculty. The instrument covers the quality of work, communication (oral and written), leadership and teamwork abilities. These assessments provide feedback to the instructor, and are used in evaluating students and providing grades and student feedback at the end of the service learning project. Anecdotal end-of-course student comments rate the service learning experience "extremely positive" and note and increased confidence from their participation. Several have noted it made a difference in later job interviews.

Suggestions for Implementation

Prior to implantation, a service learning project must be well planned before the online semester begins. Preparing requirements for qualification, expected activities to reinforce selected knowledge and skills, and deliverables used to provide feedback for grading must be included. Starting with one or two standardized options (i.e. Junior Achievement, VITA) provides a basis for additional projects. It is also helpful for the instructor to develop a relationship with someone in the community organization, preferably a coordinator.

Early in the semester, an explanation of the service learning project options should be provided in detail to students. Fully discuss the learning objectives and required deliverables and documentation (e.g. signed completion forms, photographs, journaling, and reflection papers). It is important for students to have input to increase commitment to the service learning project and to the organization. However, it is important to coordinate students and projects so their instructor can track progress and assure a good student-organization fit. For example, a student with an extreme stuttering challenge assigned to Alzheimer's Association fundraising event helped coordinate work flow behind the scenes, independently managing backstage activities. Encourage diversity as well. One professor assigned male students to work with the Girl Scouts in a much needed diversity exercise. Non-accounting majors were assigned to the VITA tax preparation project to organize work flow of volunteers and prepare schedules for clients.

Finally discuss projects and learning with the class in a chat room and post student reflections of the project. Alumni websites and social media (i.e., Facebook) can be used to follow up with long-term learning from the online service activities. Remind students to include their service learning volunteer work on their resumes. Service learning projects and experiences provide a competitive

advantage in the job search, particularly for students with limited or no work experience.

Areas for Further Research

With the growth of online courses around the world, projects must be adapted to this style of learning and teaching. The benefits of the service learning project are important to students, faculty, the college, and the greater community. It also provides a key deliverable for student resumes, facilitating the job search process. Organizations benefit from free student "consulting" and often screen potential employees from the student volunteers. The mission of colleges and universities continues to expand to include more external stakeholders and service learning projects provide synergies for all concerned. With continual adaptations of the pedagogy to the online learning environment, the success of these projects will continue. Mechanisms for linking the community organizations with the college campus and appropriate courses will develop as organizations learn about the benefit of student engagement.

Future research is needed in a number of key areas. First is to explore how adaptations are made in the online learning classroom to incorporate service learning with studies and documentation from a variety of disciplines that explore the pedagogy, grading challenges, ways to implement the process using technology, and studies of student learning, satisfaction, and retention.

In terms of application, community organization partners should be surveyed about the short and long-term benefits and the success of service learning projects. Studies should examine the degree of community involvement by online student populations and how to further this level of integration to foster transfer of knowledge from students into local communities and economies.

Finally case studies examining the longitudinal impact of service learning for online students are needed. Do online students become more engaged, charitable and philanthropic after helping an area organization via service learning? Are online students more likely to volunteer their time and money to help the chosen organization or other organizations after participating in service learning? Are there differences in engagement in online versus face-to-face educational settings? Does involvement in service learning projects provide better employees? What service learning projects are available after students gain experience with existing programs in community organizations?

REFERENCES

Becker, W., Highsmith, R., Kennedy, P., & Walstad, W. (1991). An agenda for research on economic education in colleges and universities. *The American Economic Review, 81*(3)*, 26-32.

Bolkan, Joshua (2013) "Report: Students Taking Online Courses Jumps 96 Percent over 5 Years," Campus Technology, June 24, at: http://campustechnology.com/articles/2013/ 06/24/report-students-taking-online-courses-jumps-96-percent-over-5-years.aspx.

Bonwell, C. & Eison, J. (1991). Active learning: Creating excitement in the classroom. *ASHE-ERIC Higher Education Report No. 1*. Washington, DC: George Washington University.

Bringle, R. & Hatcher, J. (1995). A service-learning curriculum for faculty. *Michigan Journal of Community Service Learning, 2*, 112–122.

Bringle, R. & Steinberg, K. (2010). Educating for informed community involvement. *American Journal of Community Psychology, 46*, 428-441.

Brown, L., Cox, B., & Watts, C. (2010). College students and service learning: Guys do it, too!, *Journal of Learning in Higher Education, 6*(1), 21-31.

Buckles, S. (1999). Using cases as an effective active learning technique. In W. Becker & M. Watts (Eds.), *Teaching economics to undergraduates: Alternatives to chalk and talk* (pp. 225-240). Cheltenham, UK: Edward Elgar Publishing, LTD.

Calvert, V., & Kurji, R. (2012). Service-learning in a managerial accounting course: Developing the 'soft' skills. *American Journal of Economics and Business Administration, 4*(1), 5-12.

Caro, C., Lirette, K., & Yest, M. (2013). Redesigning MGMT 4010S: Creating a cause of social responsibility and social justice. *American Journal of Business Education, 6*(2), 155-159.

Coye, D. (1997). Ernest Boyer and the new American college. *Change, 29*, 20-29.

Eisenhardt, A. & Ninassi, S. (2010). The application of international service learning principles. *Journal of Learning in Higher Education, 6*(2), 57-61.

Elzinga, K. (2001). Fifteen theses on classroom teaching. *Southern Economic Journal, 68*(2), 249-257.

Flinders, B. (2013). Using the "baccalaureate essentials" to create context: Evaluation of an innovative approach. *Contemporary Issues in Education Research, 6*(3), 305.

Giles, D. & Eyler, J. (1994). The impact of a college community service laboratory on students' personal, social and cognitive outcomes. *Journal of Adolescence, 17*, 327-339.

Glenn, J. (2002). Building bridges between school and community: Service learning in business education. *Business Education Forum, 56*, 9-12.

Grauerholz, L. (2001). Teaching holistically to achieve deep learning. *College teaching, 49*(2), 44-51.

Gresh, K. & Mrozowski, S. (2000). "Faculty student interaction at a distance: Seeking balance." Proceedings presented at *Educause 2000*, 2-9. Retrieved October 22, 2001, from the World Wide Web: (ERIC Document Reproductions Service No. ED452805).

Hagan, L. (2012). Fostering experiential learning and service through client projects in graduate business courses offered online. *American Journal of Business Education, 5*(5), 623-631.

Hansen, W. (1999). Integrating the practice of writing into economics instruction. In W. Becker, & M. Watts (Eds.), *Teaching economics to undergraduates: Alternatives to chalk and talk* (pp. 79-118). Cheltenham, UK: Edward Elgar Publishing, LTD.

Johnson, K. (2013). Creating experiential learning in the graduate classroom through community engagement. *American Journal of Business Education. 6*(1), 149-154.

Kahn, R. & Hill, J. (2013). Conceptual framework for integrating industry/client-sponsored projects into online capstone courses. *Journal of Asynchronous Learning Networks, 17*(4), 1-15.

Kazmer, M. (2000). Coping in a distance environment: Sitcoms, chocolate cake, and dinner with a friend. *First Monday*, 5(9), http://www.firstmonday.dk/issues/issue5_9/kazmer/index. html.

Kolowich, S. (2014) "Exactly How Many Students Take Online Courses?" Wired Campus, http://chronicle.com/blogs/wiredcampus/exactly-how-many-students-take-online-courses

Lucy-Bouler, T. & Lucy-Bouler, T. (2012). Service learning positively impacts students' involvement, retention and recruitment. *Journal of Learning in Higher Education, 8*(1), 19-24.

McCarthy, M. (1996). One-time and short-term service learning experiences. In B. Jacoby (Ed.), *Service learning in higher education: Concepts and practices* (pp. 113-134). San Francisco, CA: Jossey-Bass publisher.

McKeachie, W. (1999). *McKeachie's teaching tips: Strategies, research and theory for college and university teachers* (10th ed.). Boston: Houghton Mifflin Company.

McLellan, H. (1999). Online education as interactive experience: Some guiding models. *Educational Technology, 39*(5), 36-42.

Olney, C., Livingston, J., Fisch, S., & Talamantes, M. (2006). Becoming better health care providers: Outcomes of a primary care service-learning project in medical school. In R. N. Reeb (Ed.), Community action research: Benefits to community members and service providers (pp. 133-147). New York: The Haworth Press, Inc.

Palloff, R. & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco, CA: Jossey-Bass, Inc.

Quintilian. (1988). Institutio oratorio. (H. Butler, Trans.). In T. Benson & M. Prosser (Eds.), Readings in classical rhetoric. Davis, CA: Hermagoras Press.

Reeb, R. (2010). Service-learning in community action research: Introduction to the special section, *American Journal of Community Psychology, 46*, 413-417.

Reeb, R. & Folger, S. (2013). Community outcomes of service learning. In P. Clayton, R. Bringle, & J. Hatcher (Eds.), *Research on service learning: Conceptual frameworks and assessment* (pp. 389-418). Sterling, VA: Stylus Publishing.

Sabbaghi, O., Cavanagh S. J., G., & Hipskind S. J., T. (2013). Service-learning and leadership: Evidence from teaching financial literacy. *Journal of Business Ethics, 118*(1), 127-137.

Staples, K. & Ornatowski, C. (1997). Introduction. In K. Staples and C. Ornatowski (Eds.), *Foundations for teaching technical communication: theory, practice, and program design,* (pp. xi-xxi). Greenwich, CT: Ablex.

Warner, J., Glissmeyer, M., & Gu, Q. (2012). Are real world projects worth the risk? Evidence from service learning project. *Journal of Instructional Pedagogies, 7*(February), 1-9.

Weiler, L., Haddock, S., Zimmerman, T., Krafchick, J., Henry, K., & Rudisill, S. (2013) Benefits derived by college students from mentoring at-risk youth in a service-learning course, *American Journal of Community Psychology, 52*, 236-258.

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A Multi-Stage Maturity Model for Long-Term IT Outsourcing Relationship Success

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ABSTRACT

The Multi-Stage Maturity Model for Long-Term IT Outsourcing Relationship Success, a theoretical stages-of-growth model, explains long-term success in IT outsourcing relationships. Research showed the IT outsourcing relationship life cycle consists of four distinct, sequential stages: contract, transition, support, and partnership. The model was built in three steps: creation of a suggested model; creation of a conceptual model based on survey data gathered from business and IT executives, managers, and professionals experienced with long-term IT outsourcing; and advancement of the conceptual model to a theoretical model. Subject matter experts were interviewed to assess the validity and completeness of the model, which may be used to examine both sides of the IT outsourcing relationships and their progress through time. Understanding the expectations of each partner at different stages of the relationship should minimize deficiencies, misunderstandings, and mismatched foci to result in better partnerships.

INTRODUCTION

Information technology (IT) outsourcing profits have continued to grow even during the present economic downturn. This trend has continued, in part, because "organizations still outsource for cost, efficiency, access to skills, focus on core business, innovation, modernization and even business transformation" (Young et al., 2008, p. 8). Of 20 megadeal outsourcing contracts signed in 2008, 14 (70%) were for IT, a strong indication that long-term IT outsourcing dominates the information system outsourcing market (Young et al., 2008). Seven of them were renewals or extensions of existing contracts. Thus, long-term partnerships comprised 35% of the repeat business with incumbent providers. Gartner (Young et al., 2008) indicated that for successful IT outsourcing, providers must offer specialized IT services at lower costs while making sufficient profits to sustain and grow their companies. Customers must be judicious in choosing providers because providers' tools, skill sets, and cultural fit are crucial in managing customers' IT. However, 65% of the announced outsourcing contracts in 2008 were new deals from first-time buyers. Thus, even with economies of scale, challenges to buyers' satisfaction include technical advantage, cultural fit, low maturity, and misaligned expectations (Young et al., 2008).

Tightening contracts and using contract-balanced scorecards and service level agreements (SLAs) to prevent potential failure (Cullen, 2009; Simkova, 2005) have not been particularly effective. However, problems with providers are almost always related to people (Rossi, 2007), successful outsourcing is more highly correlated with relationships between clients and providers than with tight contracts and SLAs. By improving their IT outsourcing relationships, partners can mitigate the most significant issues hindering success.

The Multi-Stage Maturity Model for Long-Term IT Outsourcing Relationship Success is a theoretical model based on the hypothesis that long-term IT outsourcing relationships change over time, reflecting various stages of maturity. During the life cycle of the relationship, partners' expectations and perceived commitments differ from one stage to another. For successful outsourcing relationships, partners must agree to mutually developed expectations that are well understood by both parties. These expectations should be realistic, measurable, and timely. They must also occur at precise moments in the longitudinal life cycle of the contract. Only by understanding these stages and the criteria for ensuring success will partners develop the appropriate strategies to advance their maturity.

INFORMATION TECHNOLOGY OUTSOURCING

IT outsourcing is the contracting of an organization's IT-related decision making and processes to a third party vendor (Dhar & Balakrishnan, 2006; Kern, 1997). Orga-

nizations may outsource to cut costs, access advanced IT capabilities, improve performance and reliability, and focus on their core business. Contracts specify services provided, monetary considerations, and length of time.

Researchers studying IT outsourcing have agreed that the reasons for outsourcing are complex. Lacity, Hirschheim, and Willcocks (1994) found financial reasons (i.e., cutting costs, improving cost control, restructuring IT budgets) were the main motivation. Other reasons included returning to core competencies, facilitating mergers and acquisitions, and starting new companies. Loh and Venkatraman (1992) found companies sometimes outsource to solve poorly run IT. Quinn (1999) added that companies use IT outsourcing to gap organizational divides in their internal structures that cannot be achieved otherwise. Lacity and Hirschheim (1993) suggested outsourcing decisions may result from organizational politics, conflicts, and compromises. However, the focus of most IT outsourcing studies has been clients (Gonzalez, Gasco, & Llopis, 2006).

Researchers have used a variety of economic theories to explain the motives for outsourcing and the outsourcing relationship (Gonzalez et al., 2006): agency theory, transaction cost economics theory, game theory, resource-based theory, and resource-dependence theory. In only a small percentage of studies did researchers use relationship as a unit of analysis, examining relationships primarily from a contract or economic perspective (Gonzalez et al., 2006). The primary theories used in those studies were transaction cost economics and agency theory in which clients and vendors have conflicting goals. The concern and the risk were that differences in goals may result in self-serving, opportunistic behaviors on the part of vendors. Consistent with this theory was the common theme based on the customer's point of view that successful relationships were dependent on well-structured contracts and other detailed material created by legal advisors. Closely related to this theme was service quality, a method to measure quality, and a way to assess value versus cost. However, inter-organizational relationship theories were underrepresented (Gonzalez et al., 2006).

Hyder, Heston, Paulk, and Hefley (2009) stated the imbalance between customer and provider perspectives in the literature may be because those perspectives are better presented in practice by the people involved. Knowledge gained from the provider's perspective is the provider's intellectual property and not easily accessed. Studying the financial success or failure of a contract from the vendor's perspective has also been difficult because most companies amortize fixed costs, gains, and losses or spread them across multiple contracts within their customer base. Kern and Willcocks (2002) believed ignoring the relationship

perspective in IT outsourcing is paradoxical because its impact may be the difference between success, moderate success, or failure. Therefore, research must be focused on the outsourcing relationship. Success is not sustainable if it is only one-sided. Contracts unfair to vendors eventually result in corner cutting, bad service, and disputes. Contracts unfair to customers result in resentment, distrust, and more dysfunction (Hyder et al., 2009; Loesche & Hefley, 2009).

Thus, long-term success of IT outsourcing relationships is dependent on how well parties manage and meet each other's expectations. These expectations may be verbal (i.e., lawful contracts and SLAs) or nonverbal (i.e., psychologically perceived commitments). Parties must be aware of these expectations and manage them so they are realistic, timely, and measurable. Expectations not meeting these characteristics cannot be mapped to success criteria.

However, success criteria cannot be fully discovered unless these relationships are fully explored from both client and vendor perspectives. To this end, this multi-stage theoretical model may be used to plan, manage, and govern IT outsourcing relationships for success.

CURRENT IT OUTSOURCING MATURITY MODELS

Four IT outsourcing maturity models currently exist. Lacity and Willcocks (2000) addressed the operational aspects of the outsourcing contract, focusing on primary activities, key factors, and intended outcomes in their six-phase model. Alborz, Seddon, and Scheeper (2003) examined IT outsourcing process and performance based on efficiency and effectiveness as perceived by stakeholders. They created a three-stage, eight-phase model to explain the IT outsourcing relationship. Cullen, Seddon, and Willcocks (2005) developed a four-phase life-cycle model, each phase composed of nine building blocks, with 54 key activities. Gottschalk and Solli-Sæther (2006) described the IT outsourcing relationship as a three-stage model. However, none of these models include both vendor and customer perspectives.

As business, technology, and outsourcing evolve, individual expectations change. Partners must understand these changes and plan accordingly. Both the 10-year, $1.6-billion privatization contract between IBM and Indiana Family and Social Services Administration that ended when both parties sued each other (McGarrah, 2011) and the cancellation of National Health Service's (United Kingdom) $1.75-billion contract with Fujitsu (Young et al., 2008) revealed the hostility, bitterness, and termination of relationships that may result from mismatched

vendor and customer foci. In contrast, healthy partnerships often result in contract renewal or extension.

THE MULTI-STAGE MATURITY MODEL FOR LONG-TERM IT OUTSOURCING RELATIONSHIP SUCCESS

Outsourcing contracts result in different types of management challenges for both providers and clients. Ever changing technology, the complexity of computer systems and their environments, and the accelerating economic and social environmental changes may result in lower hardware and software costs but higher maintenance costs, obsolete systems that must be replaced, and rapidly changing rules of business. All may make contract conditions obsolete or undeliverable, which makes resource planning difficult. Thus, long-term IT outsourcing contracts must be carefully planned, governed, and executed so clients' IT infrastructure does not become obsolete. Because of these dynamics, both providers and clients must adjust their expectations constantly, revisiting their strategies to be successful.

Long-term IT outsourcing should be viewed not just as a contract but also as a relationship in which "client and vendor(s) are connected or related via individual managers for the duration of the contract period of an outsourcing venture" (Kern & Willcocks, 2001, p. 51). These relationships are complementary by nature (Kern & Willcocks, 2000):

- Both key actors have something of value to contribute.

- Both invest in each other and depend on each other.

- Both have open communication and are friendly toward each other.

- Both build their relationship on interconnections that cannot be easily broken.

These relationships are also marked by high levels of information sharing, communication quality, collaborative participation, trust, and commitment (Seo, Han, & Lee, 2005).

To manage long-term IT outsourcing relationships, both parties must meet or exceed each other's expectations. Dibbern, Goles, Hirschheim, and Jayatilaka (2004) stated success may be understood either as satisfaction, which includes a positive attitude toward the key actors involved and the realization of objectives, or the performance of activities being outsourced. Grover, Cheon, and Teng (1996) showed success criteria are directly related to the degree of satisfaction related to expected outcomes. Thus,

long-term IT outsourcing success criteria are a set of realistic, measurable, and timely expectations. Without these characteristics, success criteria are undeliverable, which constitutes failure.

The Multi-Stage Maturity Model for Long-Term IT Outsourcing Relationship Success is a maturity model, not a capability maturity model. It reflects the growth of a cycle in stages, with one stage built on the previous stage to achieve higher maturity levels until the cycle reaches the final expected outcome.

CREATION OF THE MODEL

The first three steps of Solli-Sæther and Gottschalk's (2010) five-step process was used in building this theoretical IT outsourcing maturity model. The longitudinal nature of empirically testing, revising, and retesting theoretical models necessitated narrowing the scope of the present research to the first three stages (Solli-Sæther & Gottschalk, 2010). Thus, research began with the creation of a suggested model, which was transformed into a conceptual model and, finally, into a theoretical model (Figure 1-next page).

The target population was IT and business executives, managers, and professionals from private and public sectors, including both for-profit and non-profit organizations. These individuals were accessed through (a) the membership of the International Association of Outsourcing Professionals and (b) current and past associates of the researcher. Only individuals with direct experience in negotiating, executing, and managing IT outsourcing relationships were invited to participate. The contract profile used in selecting the sample was a minimum size of $100 million and a minimum length of 3 years to ensure uninformed participants would not distort the data.

A sample of 134 practitioners was invited via email with an embedded URL to the survey site hosted by SurveyMonkey, a Web-based survey engine. This group was asked to complete questionnaires to identify and validate the four stages of the model and the expectations associated with each stage. The sample included men and women with extensive experience in outsourcing either as clients or vendors. They worked across the globe for U.S.-based companies in diverse industries, including banking, healthcare, wholesale suppliers, retailers, and government agencies. None of the participants had any vested interest in the research study other than a desire to contribute to the body of knowledge. Of the 134 individuals invited, 51 completed the surveys. However, many of these respondents answered questions concerning multiple stages; thus, actual units of analysis were much higher.

FIGURE 1
THE STAGES-OF-GROWTH MODELING PROCESS.
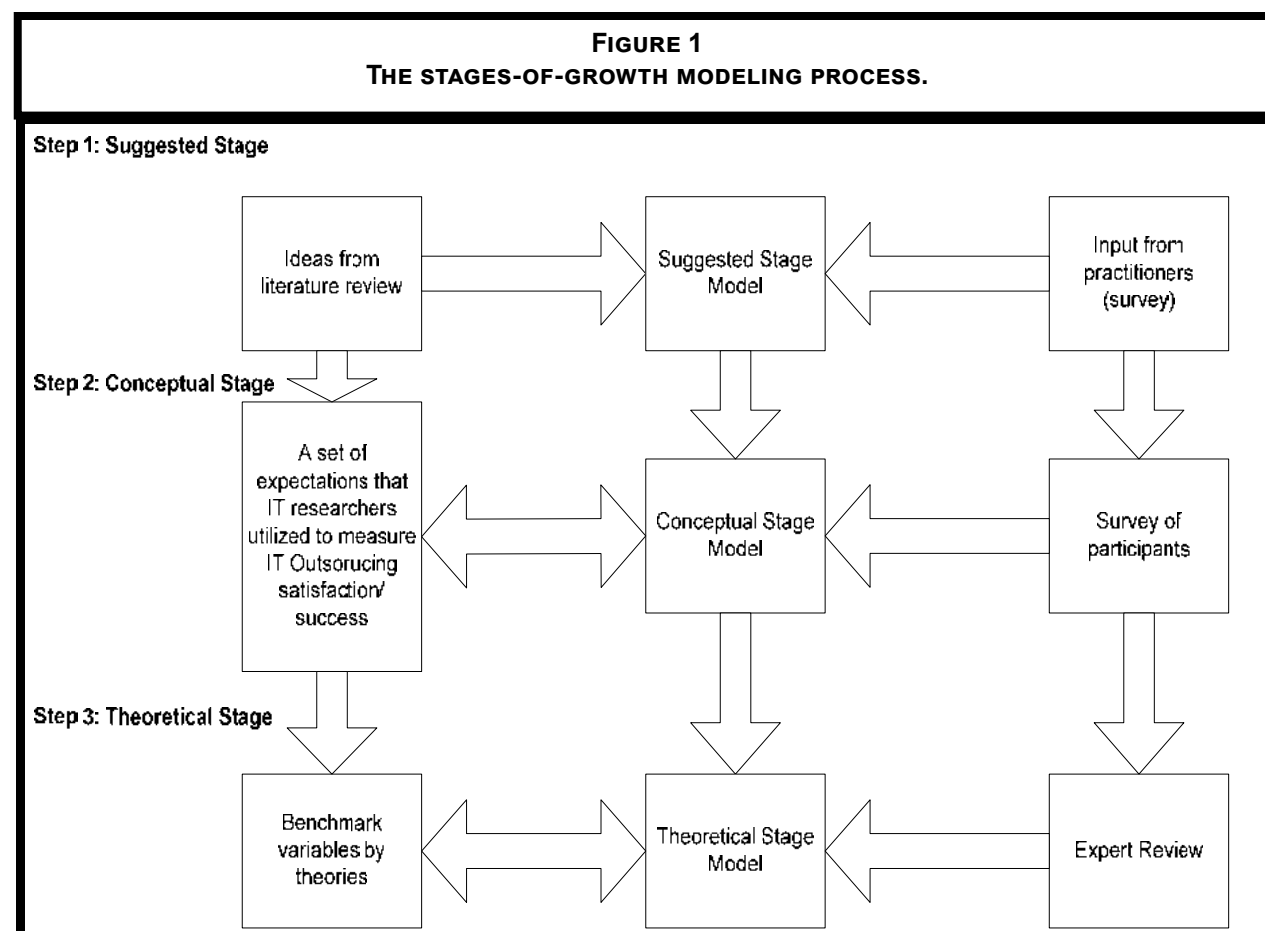
A second group of participants from the target population was selected through judgmental sampling to serve as subject matter experts (SMEs) to validate the final theoretical model. These individuals all had firsthand knowledge in negotiating, managing, and executing IT outsourcing contracts. Each SME participated in a one-on-one interview. Interviews ranged from 45 minutes to 2 hours in length.

The Suggested Model

The stages-of-growth-model perspective is one of the most common in management literature and has been used to explain how organizations move from initial development to ongoing viability (Drazin, Glynn, and Kazanjian (2004), Kazanjian and Drazin (1989). Gottschalk and Solli-Sæther (2006) indicated long-term IT outsourcing relationships have predictable patterns of change over time as the relationships evolve. If both vendor and customer are committed to succeeding, they may advance their relationship through the conceptualization of these patterns.

Based on previous research (Alborz et al., 2003; Cullen et al., 2005; Gottschalk & Solli-Sæther, 2006; Lacity & Willcocks, 2000), this research describes and explains IT outsourcing success with a maturity model consisting of four stages: contract, transition, support, and partnership. These four stages represent a sequential hierarchical progression, involving both vendor and client, from the time of contract negotiation to the end of the life cycle.

The Conceptual Model

Long-term IT outsourcing success criteria are a set of realistic, measurable expectations delivered in a timely fashion. In the second step of model creation, participants completed a questionnaire concerning expectations in IT outsourcing relationships. The survey consisted of 47 expectations derived from six classical and popular theories (i.e., transaction cost economics, agency theory, resource-based view, core competency theory, complementary relationship theory, and psychological obligation principles). The expectations were classified as either customer expectations (Table 1) or vendor expectations (Table 2). Participants ranked each expectation for each stage of the suggested model using the following scale: 1 = no impor-

	TABLE 1 CUSTOMER EXPECTATIONS DERIVED FROM THE LITERATURE
	Expectation
CE01	Customer can focus on core business.
CE02	Customer can obtain better and more technology (technology expansion) as business continues to grow.
CE03	Customer can obtain services and technologies not available internally.
CE04	It is less expensive for customer to outsource since vendor can take advantage of economies of scale.
CE05	Partners build comprehensive and complete contract and SLAs.
CE06	Partners build on effective inter-organizational team.
CE07	Partners build on flexible work practices.
CE08	Partners build short term contract that can be renegotiated and reinterpreted later.
CE09	Partners participate in knowledge sharing.
CE10	Partners share risks.
CE11	Staff reduction/redeployment for customer since vendor will support IT.
CE12	Vendor has adequate IT knowledge.
CE13	Vendor has adequate staffing.
CE14	Vendor has clear authority structure.
CE15	Vendor has clear and effective communication.
CE16	Vendor meets or exceeds SLAs.
CE17	Vendor standardizes services and technologies.
CE18	Vendor takes charge of the customers IT portfolio and resources.
CE19	Vendor does not overbill.
CE20	Vendor provides remedy for poor IT performance.
CE21	Customer can limit IT operation risks and improve business resiliency.
CE22	Vendor has financial strength.
CE23	Partners share financial success.

	TABLE 2 VENDOR EXPECTATIONS DERIVED FROM THE LITERATURE
	Expectation
VE01	Customer has adequate knowledge of business.
VE02	Customer has clear authority structure.
VE03	Customer improves discipline and accountability.
VE04	Customer is effective in knowledge sharing.
VE05	Customer pays for added technologies and services as scope and complexity of services increase.
VE06	Customer pays on time.
VE07	Customer provides clear scope of work.
VE08	Customer provides governance for contract and SLAs.
VE09	Customer relies on vendor for service and technological directions.
VE10	Customer takes ownership of projects.
VE11	Partners build comprehensive and complete contract and SLAs.
VE12	Partners build on effective inter-organizational teams.
VE13	Partners build on flexible work practices.
VE14	Partners build short term contract that can be renegotiated and reinterpreted later.
VE15	Partners participate in knowledge sharing.
VE16	Partners share risks.
VE17	Staffing and skills increase for vendor to enable required support for customer.
VE18	Vendor profits from the outsourcing deal.
VE19	Vendor provides competitive advantages.
VE20	Vendor gains domain expertise or competitive advantages as the results of the contract.
VE21	Cost saving or financial improvement for the customer.
VE22	Customer has clear and effective communication.
VE23	Partners share financial success.
VE24	Customer has financial strength.

tance, 2 = low importance, 3 = high importance, and 4 = great importance.

Participants could also provide expectations not included in the survey items. These comments were analyzed and, when appropriate, considered data for one of the expectations already listed on the instrument. For example, one comment suggested the expectation of data center consolidation in the contract stage. Because data center consolidation is an IT service provided by IT vendors, the comment was considered the same as CE03, "Customer can obtain services and technologies not available internally." If the respondent had already marked that expectation as being of great importance, no adjustment to the data was necessary. If the respondent had given it a lesser classification or no mark at all, then the data were adjusted to reflect the greater level for this expectation. Only two of the four additional expectations cited resulted in adjustments to the data.

The unit of analysis was the stage of relationship between the client and vendor in a long-term IT outsourcing contract. Analysis started with the examination of customer and vendor perspectives within each stage. Findings for each perspective were combined to draw conclusions for the unit and the overall theoretical model.

Contract Stage

Long before the contract stage, customers decide to outsource. They spend time to fully understand the ramifications of their choice: the effects on IT staff, IT services, business processes, and company financials. Because their decision has enormous implications, most companies seek outside legal and outsourcing consulting expertise in vetting vendors and negotiating contracts.

Outsourcing relationships start when customers and vendors begin contract negotiations. This stage includes formal competitive bidding, requests for proposals, due diligence, pricing, proposals, and contract negotiation and requires 3 to 9 months to complete. Lawyers; consultants; vendor company CEO, CFO, and CIO; client executives; and other senior managers negotiate the memorandum of understanding and the master outsourcing service agreement or the master contract. The master contract includes contractual terms, services, costs, and resources involved. Resources include human resources, hardware equipment, software, facilities, third-party contracts, and intellectual property. The duration of these initial IT outsourcing contract terms range between 3 and 10 years. According to the SMEs, contracts of any shorter duration may discourage parties from investing in the relationship, technologies, equipment, and resources because of prohibitive costs. After the initial term, customers have the option to

renew. Renewal terms are usually 3 to 5 years, as stated in the master contract.

The master contract also contains clauses (termination for cause; termination for convenience) to cover ending the relationship for any reason contract terms cannot be met. These clauses are typically tied to financial penalties, reimbursements, and even contract exit assistance. Thus, termination is generally expensive for the initiating party.

Besides the master contract, business and IT SMEs under the watch of legal counsel from both sides develop detailed work orders or statements of work for each IT service (e.g., helpdesks, system administration, database administration, and application support). These statements define the work activities, deliverables, and timelines vendors must execute in performance of specified work for clients.

Expectations

Twenty research participants completed the customer portion of the questionnaire; 12 completed the vendor portion. The top five expectations identified for customers, in rank order, were CE03, CE04, CE02, CE13, and CE12. Customers' top expectations were cost reduction, technology accessibility, and technology improvement. Customers expect vendors to have adequate staffing and IT knowledge to provide high quality, cost-effective outsourcing services. Customers expect access to services and technologies not available internally. They expect vendors to run customers' IT operations and to improve their use of technology. They expect vendors to provide new and better technologies to allow them to adapt to advances in technology, business processes, and business functions as their businesses grow and evolve.

The top five expectations identified for vendors, ranked in order, were VE18, VE20, VE19, VE21, and VE06. Investments in the early stages of outsourcing contracts are extremely expensive for both parties but especially for vendors because of the upfront investments required. Therefore, realizing a profit and timely payments are among vendors' greatest expectations. This is why vendors have a vested interest in their customers' success. Thus, their intention is not only expense and cost control but also enhancement of customers' revenue-generating abilities. The universal expectations are that vendors have the ability to perform, will continue to have such abilities, and will profit from their abilities and performance.

Financial and resource investments at this stage are significant for both parties; thus, early IT outsourcing failure is a significant loss for both sides. In negotiating the

contract, both parties must understand that both parties must make profits. Contracts must also be meaningful and enforceable because fair, meaningful, enforceable contracts are the foundation for the second stage, transition.

Cases

In 2005, Sears terminated its relationship with Computer Sciences Corporation (CSC) less than a year after signing the $1.6-billion contract, citing failure to deliver (Bierce & Kenerson, 2009; McDougall, 2005). CSC sued, disputing whether the termination was for cause or for convenience, arguing the reason for the termination was the Sears-Kmart merger. When the court found in favor of CSC, Sears had to pay CSC tens of millions of dollars in termination for convenience fees. In 2007, the two companies settled out of court for an unspecified amount paid by Sears (Bierce & Kenerson, 2009).

Only months after Perot Systems and Triad Hospitals signed a $1.2-billion, 10-year contract in 2006, Community Health Systems acquired Triad and cancelled the Perot Systems contract. Because Perot Systems had reported zero revenue, citing heavy upfront data center investment costs, Community Health Systems had to pay Perot Systems substantial fees to terminate the contract for convenience (CBR Staff Writer, 2007).

The $5-billion cancellation between IBM and JPMorgan Chase in 2004 occurred 18 months after outsourcing. The companies issued a joint statement indicating the contract did not work well. The customer, JPMorgan Chase, considered the vendor's margins too high and wanted to be active participants in managing their technology because of its potential as a competitive advantage within its industry. The vendor, IBM, did not find the arrangement financially attractive. Both companies agreed to stop trying to make the contract work (Cowley, 2004; Kawamoto, 2004).

Although the first two cases show that failures are not always due to companies not doing their homework prior to signing contracts, the case of IBM and JPMorgan Chase does reveal what may happen when one or both parties do not conduct due diligence thoroughly. All three cases are clear illustrations that early IT outsourcing failure results in significant losses for both parties.

Transition Stage

In the transition stage, customers transfer services and resources to vendors. This stage requires 6 to 18 months to complete. The SMEs believed it is the most important stage of the entire contract relationship. In concept, this

stage does not start until the contract is signed. In practice, all stages are eclectic and pervasive. Although the parties plan for high-level transition in the contractual negotiation, details cannot be determined. Services, people, licenses, and resources are usually transferred between multiple vendors with relationships to the customer, not just between one vendor and the customer. These interactions result in another level of complexity, including additional contract agreements for matters not addressed during the contract stage.

SLAs must be designed to provide IT services on time, for acceptable costs, and in accordance with specified quality. Typically, partners have 90 days after the signed master contract to establish the SLAs.

Expectations

Twenty-seven participants completed the survey for the transition stage, 16 for the customer portion and 11 for the vendor portion. The top five expectations for customers, in rank order, were CE13, CE12, CE05, CE11, and CE15. The top five expectations for vendors, in rank order, were VE11, VE01, VE07, VE04, and VE02.

For both partners, transition is about transferring knowledge, creating organizational structure, defining roles and responsibilities, and establishing services and SLAs to complete the contract agreement. Customers expect vendors to be adequately skilled and staffed to accomplish the transition. They want their new IT to work seamlessly and transparently and be better and more cost effective than the old. Vendors expect not only financial rewards for delivering quality and service but also good reputations and expansion of their core skills. Some vendors create special teams of their most experienced professionals to perform transitions.

Customers must build organizations with in-depth knowledge of their business, provide necessary governance, and manage operation schedules. As responsibilities shift, they must create effective management structures with reduced staff. Vendors must build organizations with technical capability and learn their customers' business and IT applications and infrastructure.

Both parties must communicate clearly. Although important in every stage of the life cycle, it is crucial during this stage when interaction and knowledge transfer are more frequent. Having clear authority structures for both parties is another expression of this expectation. Both parties must also retain transferred knowledge throughout the remainder of the contract.

Unfortunately, many vendors believe transition is just another IT implementation consisting of project plans, ac-

tivity details within the plan, project meetings, and status and financial reporting. Many customers abdicate their IT responsibilities upon completion of contract negotiation, depending on third-party outsourcing management services to oversee operational schedules. These types of arrangements are the root of failures in this stage. Failure is also expensive for both parties due to high up-front investment costs.

Cases

The failed contract between IBM and the Texas Department of Information Resources (DIR) shows the expense of early failure and the increased losses to both parties due to delays in solving problematic contracts. This 7-year $863-million contract signed in 2006 included consolidation of 28 DIR datacenters into two by 2009. However, the two organizations became entangled in conflicts, accusing each other of failing to uphold the contract. In 2008, Governor Perry ordered a temporary halt to consolidation because of concerns about data backup for the systems. In 2010, DIR hired Equa Terra (now KPMG), a consulting firm to perform an internal audit. Equa Terra found governance provisions in the contract ineffective and inappropriate (Towns, 2010). The firm urged an overhaul of the arrangement (Hoover, 2009). Although they cited misalignment of business intent with organizational, financial, and operational realities as the main problem, other problems included interagency dynamics and categorization and prioritization of workloads (Hoover, 2009).

In July 2010, the DIR CIO sent a notice to cure to the CEO of IBM. IBM had 30 days to correct these problems: (a) completion of only 12% of the transition, (b) failure to complete transformation services in accordance with the terms of the master contract, (c) failure to perform backup and recovery, (d) failure to deliver a disaster recovery plan, (e) failure to provide sufficient and suitably qualified personnel, (f) failure to implement data security, (g) failure to perform the services in accordance with applicable service levels, (h) failure to implement asset management, (i) failure to implement change management, (j) failure to implement system management, and (k) ineffective system monitoring (Miller, 2010). IBM disagreed with DIR, indicating DIR could terminate the master contract for cause. IBM also blamed the State, attributing problems to "fundamental changes in DIR's approach to the project, its commitment to improve its governance of the project and its management of the other agencies involved" (Miller, 2010, 7). In March 2012, DIR announced a $901-million, 8-year deal with Xerox and a $127-million, 6-year deal with CapGermini for overall project management services (McDougall, 2012).

Neither IBM nor DIR met each other's expectations. Regardless of the breeches DIR cited, Equa Terra found the contract unsustainable because DIR had no clear authority structure (Hoover, 2009). DIR also did not have adequate knowledge of the business. Lack of governance and management, coupled with lack of business knowledge, resulted in the inability of DIR to provide IBM with a clear scope of work (Towns, 2010).

Support Stage

This stage of the IT outsourcing relationship life cycle has received the most scrutiny in research studies, with practitioners' documenting it prolifically. Success in the support stage is dependent on both customer and vendor competency.

Expectations

Thirty-three participants responded to the support stage survey, 19 for the customer portion and 14 for the vendor portion. The top five expectations for customers, in rank order, were CE16, CE17, CE01, CE19, CE02, and CE03. In this stage, SLAs are used to manage vendor performance and monitor the success of provided services. Customers expect elevated services and improved technologies at the negotiated pricing, not over billing or corner cutting that impacts service level or quality. They expect to benefit from the standards and procedures vendors established in the transition stage and through the SLAs. They expect access to services and technologies not previously accessible. They also expect delivery of new and better technologies to support their growing or evolving portfolios. However, customers must focus not only on their business but also on their skills in governing the relationship.

The top five vendor expectations, ranked in order, are VE08, VE05, VE02, VE03, and VE01. Vendors expect to do well by standardizing services and technologies offered and by getting paid on time. The master contract explicitly states how often invoices and payments are rendered; who pays taxes; and how exchange rates, duties, tariffs, levies, and governmental fees are handled. However, vendors expect customers to pay for added services and technologies necessitated by changes in technology or business but not stated in the master contract. They also expect customers to be responsible for their shop, to provide governance, to have clear authority structures, and to improve their expertise in outsourcing management. According to the SMEs, many contracts specifically include details regarding compliance and legal and regulatory accountability and liability.

Success is dependent on customer and vendor competency. Vendors must provide and continually improve the efficiency and effectiveness of quality services. Customers must understand not only their business but also governance of these relationships. Customers moving beyond rigid SLA measurements and adopting more innovative ways to measure these relationships, such as more flexible models that result in rewards to the vendors through additional business, also indicates success.

Cases

Owens & Minor and Perot Systems signed a 10-year, $229-million contract in 2002 that, according to one SME, has been extended until December 2014. David Guzman, Owens & Minor CIO, stated Perot Systems has "a compatible culture to our own in terms of delivery to our customers" and "maintains a fixed, predictable price for excellent operations; and a variable arrangement for strategic sourcing, according to Owens & Minor's needs over time" (Parry, 2004, 3) Because of this successful relationship, Owens & Minor has had time to focus on its core business, on "what's strategic" rather than on "keeping the ship afloat" (Parry, 2004, 2). This will allow them to build a partnership focused on strategic value and speed to market.

Both customer and vendor have been doing what is expected to the best of their abilities. Therefore, Owens & Minor has been able to focus on the strategic value of IT, bringing continuous improvement to business processes and business innovation. This has resulted in a restructured contract containing a more flexible two-level pricing arrangement, one for fixed, predictable operational costs and one for variable costs (Parry, 2004, 3).

Partnership Stage

In the previous stages, both partners focused on effective procurement of utility technologies and services and their management through tight contract compliance and strict governance. However, over time, the relationship evolves. As partners become more sophisticated at what they do, they engage in mutually beneficial behaviors, their expectations having common objectives. The outsourcing relationship becomes a strategic partnership, a natural outgrowth of a successful relationship. Customers leverage vendors' skills to take advantage of economies of scale and consider vendors strategic allies. Vendors develop or improve their expertise and skills, becoming more desirable both in their customers' eyes and in the market place. Thus, strategic relationships change into complementary partnerships in which (a) both key actors have something of value to contribute; (b) they invest in each other and

depend on each other; (c) they have open communication and are friendly toward each other; and, (d) they build their relationship on interconnections that cannot be easily broken (Kern & Willcocks, 2000).

Expectations

Fourteen participants, eight for the customer portion and six for the vendor portion, completed the partnership stage of the survey. The top five expectations for customers, in rank order, were CE07, CE09, CE02, CE10, CE06, and CE23. The top five expectations for vendors, in rank order, were VE12, VE13, VE15, VE23, and VE16.

For customers, the determining factor in whether vendors are strategic partners is how well and how flexibly vendors adapt to customers' growth. Previously, the most important aspects of vendors' expertise were the efficient execution of utility technologies and services and the accuracy, availability, and reliability of their systems. As strategic partners, vendors must deliver technology expansion in preparation for business growth. Vendors must become integrated parts of customers' organizations, sharing risks and successes. Vendors must also have joint expectations with customers.

Cases

Owens & Minor received the 2011 CIO 100 award for innovation for business growth. The annual award program, produced by CIO magazine, recognizes organizations that exemplify the highest levels of operational and strategic excellence in IT ("CIO100 2011 Companies," 2011). InformationWeek twice ranked the company first in its annual listing of the 500 most innovative technology users in the United States (McGee, 2003). At the Dell World conference in October 2011, Rick Mears, Owens & Minor CIO, attributed their IT success to their partnership with Perot (now Dell):

> We were technology limited for the things we wanted to get into. We needed a strategic partner who could help us align our business with technology. Dell not only proved that they have the know-how but also helped us to get that transformed and innovated technology implemented quickly and effectively in order for us to grow and expand the market. ("On the Case," 2011)

Tenet Healthcare signed the first $1-billion, 10-year IT outsourcing contract with Perot Systems in 1990. They extended it in 2001 for 10 years and again in 2006 for 10 years, making it one of the longest partnerships in the industry. Steve Brown, Tenet CIO, explained that early successes in their relationship allowed both companies

to pursue "mutually beneficial opportunities" and cited their "understanding of the people, capacities, and capabilities" (as quoted in PricewaterhouseCoopers, 2008, p. 4). The SMEs noted this partnership has not always been smooth. Tenet has constantly reevaluated the relationship and its collaborative model, renegotiating the contract four times. In 2003, when Perot Systems acquired Vision Healthsource, a billing and claims management company in India, to jump start their international expansion of their healthcare IT, Tenet was their first customer, sharing the risk and realizing the benefits of the global market.

Least Important Expectations

Survey respondents identified six customer expectations (CE08, CE14, CE18, CE20, CE21, CE22) and five ven-dor expectations (VE09, VE10, VE14, VE17, VE22) as be-ing less important. The literature indicated that, although these expectations are valid for some organizations and in some stages of the life cycle, they are not core characteristics of typical long-term IT outsourcing relationships.

The Theoretical Model

Analysis of survey results revealed 36 core expectations (17 customer; 19 vendor) that constitute characteristics of long-term IT outsourcing relationships. These core expectations neither remain static throughout the contract nor change completely from stage to stage. Whether their criticality increases or decreases is dependent on the particular stage involved. Results were further analyzed using Gregor's (2006) analysis theory criteria to identify accu-rate and credible benchmark variables for each stage in the model (Figure 2).

In the contract stage, three major concerns exist:

- Customer must achieve cost saving while vendors achieve financial improvement.

- Customers must gain in technology while vendors gain in staffing and expertise.

- Customers and vendors must both have possibilities for future technology expansion.

Resolving these concerns does not mean the parties have actually realized their intended expectations but that they are satisfied their expectations are being met. This satisfaction may be due either to clauses within the contract or to other negotiated agreements. When these concerns are resolved, the parties move to the next stage.

In the transition stage, although the importance of cost and technology still exists, new concerns emerge:

- Both parties must work together to build a comprehensive and complete contract and the SLAs.

- Both customers and vendors must build or maintain effective authority structures and organizations to support contract arrangements.

With the completed contract, the SLAs, and the appropriate organizational structures, including authority and escalation paths, in place, the parties may move to the support stage.

In the support stage, two new concerns emerge that concern core competencies and financial realization:

- Both parties must focus on what each does best.

- Customers must be prompt with their payments, while vendors must be fair in their charges.

When expectations are met and both parties feel the other is being fair, the relationship may progress to the fourth stage.

In the partnership stage, the relationship reveals characteristics of a complementary relationship:

- Partners build on flexible work practices.

- Partners share knowledge.

- Partners share financial success and risks.

- Partners become an effective inter-organizational team.

By design, companies enter long-term IT outsourcing contracts with the intention of building a partnership, much like a merger or a joint venture. This is evidentially based on the cost, time and effort to vet vendors, due diligence, and plan and negotiate the contract. Thus, the tentative partnership matures over time into a partnership, passing through sequential and predictable stages.
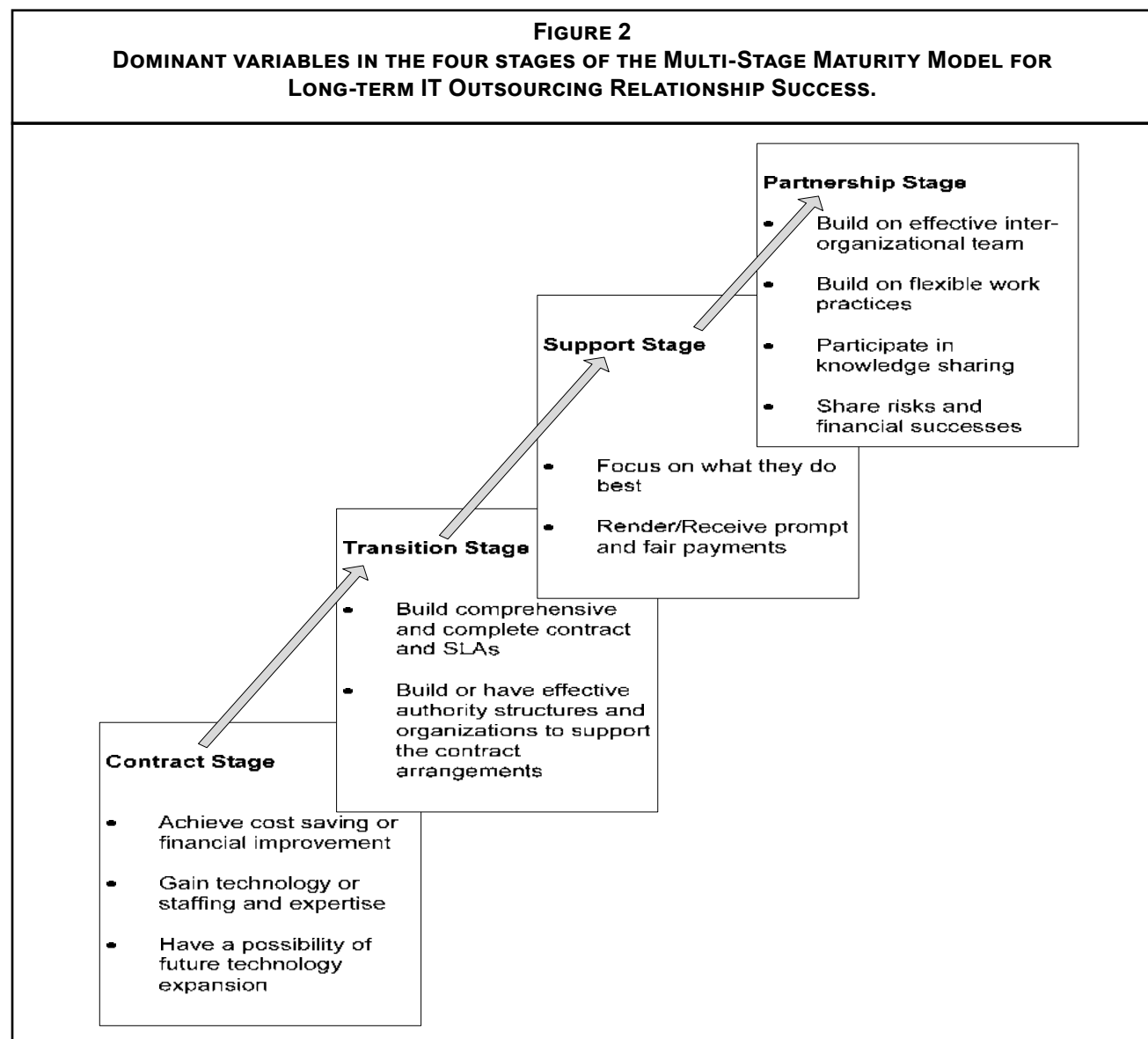
From the contract perspective, the stages of long-term IT outsourcing do not have obvious boundaries; they appear eclectic and pervasive. From a relationship perspective, the stages of growth develop sequentially, with each stage having distinguishing characteristics driven by dominant variables or concerns. Figure 3 is a summary of the four stages of the final theoretical model, including the five top expectations for each stage and the dominant variables that differentiate one stage from another.
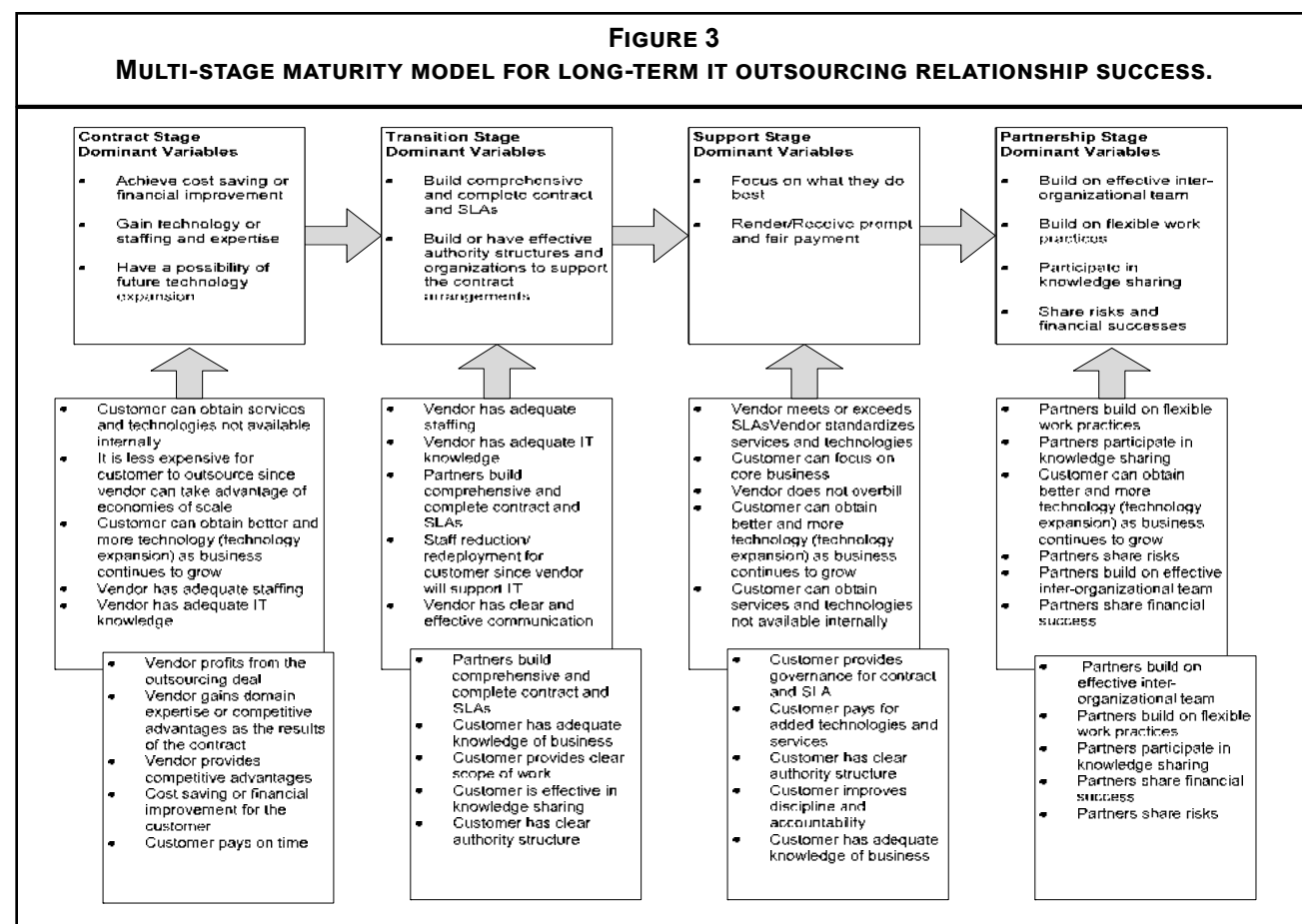
RECOMMENDATIONS

IT outsourcing consultants should use the Multi-Stage Maturity Model for Long-Term IT Outsourcing Relationship Success to help clients manage these relationships more holistically rather than legalistically. Prior to the contract, both parties must conduct due diligence to ensure a good match, both in supply and demand and in cultural fit. In the contract stage, the negotiated contract must result in saving costs for the customer and earning profits for the vendor. The contract should show the benefits of technology and the possibility of future technology expansion for both parties. Both parties must understand the cost of failures and prepare for them by including termination terms in the contract. Exit terms must be planned, as should transformations in the organizations due to global expansion, mergers, acquisitions, and new technologies. Thus, neither party should have to engage in expensive litigation or transfer costs should the partnership no longer be a suitable solution.

In the transition stage, both parties should behave as if involved in a merger or joint venture. Doing so will result in the convergence of effective governance, the business knowledge of the organization, and expertize in IT applications and infrastructure. Customers must remain actively involve and lead; vendors must build permanent operational organizations capable of retaining the transferred knowledge and skills.

In the support stage, customers must focus not only on their business but also on their governance skills. Vendors must become their clients' enablers, offering them access to extended capabilities, technologies, standards, and best practices. In the partnership stage, transformation must occur to enable business optimization and growth. Both partners must drive greater strategic effectiveness and business value via collaboration, cultural alignment, and a flexible relationship.

FIGURE 2
DOMINANT VARIABLES IN THE FOUR STAGES OF THE MULTI-STAGE MATURITY MODEL FOR LONG-TERM IT OUTSOURCING RELATIONSHIP SUCCESS.

Partnership Stage
- Build on effective inter-organizational team
- Build on flexible work practices
- Participate in knowledge sharing
- Share risks and financial successes

Support Stage
- Focus on what they do best
- Render/Receive prompt and fair payments

Transition Stage
- Build comprehensive and complete contract and SLAs
- Build or have effective authority structures and organizations to support the contract arrangements

Contract Stage
- Achieve cost saving or financial improvement
- Gain technology or staffing and expertise
- Have a possibility of future technology expansion

FIGURE 3
MULTI-STAGE MATURITY MODEL FOR LONG-TERM IT OUTSOURCING RELATIONSHIP SUCCESS.

Vendors and clients may use the model to identify the current stage of their contract relationships. They may also use it to evaluate both their partners' and their own expectations to ensure they are realistic, measurable, and deliverable in a timely manner.

However, although this research is based on mature IT relationships and on information from SMEs, 76% of IT relationships are first-time relationships (Young et al., 2008) in which partners may not have similar levels of organizational maturity. In addition, the model does not address cultural differences and global relationships. The research suggests that in global relationships, additional expectations may exist concerning data security, intellectual property protection, other privacy concerns, culture, and language. Partners must consider these constraints in determining whether the model is appropriate to use or whether they need to add their own expectations.

CONCLUSION

Long-term IT outsourcing success requires each partner to understand both parties' expectations in each of the four stages of the relationship life cycle. Failure to do so may result in the failure of the relationship at potentially great cost for both parties. The theoretical Multi-Stage Maturity Model for Long-Term IT Outsourcing Relationship Success is a tool partners may use to increase their understanding of these expectations and to plan, manage, and govern their IT outsourcing relationships to success.

REFERENCES

Alborz, S., Seddon, P. B., & Scheeper, R. (2003). A model for studying IT outsourcing relationships. In J. Hanisch & University of South Australia (Eds.), *Proceedings of the Seventh Pacific Asia Conference on Information Systems* (pp. 1297–1313). Adelaide, Australia: University of South Australia.

Bierce, W. B., & Kenerson, M. L. (Eds.). (2009, October 9). Failed deals: CSC sues sears over termination. *Outsourcing-Law.com*. Retrieved from http://www.outsourcing-law.com/2009/10/failed-deals-csc-sues-sears-over-termination/

CBR Staff Writer. (2007October 7). Perot's $1.2bn Triad deal cancelled. *CBR Computer Business Review*. Retrieved from http://www.cbronline.com/news/perots_12bn_triad_deal_cancelled

CIO100 2011 100 companies innovating for business growth. (2011, August 11). *CIO.com*. Retrieved from http://www.cio.com/cio100/2011/1

Cowley, S. (2004 September 15). Update: J.P. Morgan cancels $5B IBM outsourcing deal. *COMPUTERWORLD*. Retrieved from: http://www.computerworld.com/s/article/95933/ Update_J.P._Morgan_cancels_5B_IBM_outsourcing_deal?taxonomyId=14&pageNumber=1

Cullen, S. (2009). *The contract scorecard: Successful outsourcing by design*. Surrey, United Kingdom: Grover.

Cullen, S., Seddon, P., & Willcocks, L. (2005). Managing outsourcing: The lifecycle imperative. MIS Quarterly Executive, 4(1), 229–246.

Dhar, S., & Balakrishnan, B. (2006). Risks, benefits, and challenges in global IT outsourcing: Perspectives and practices. Journal of Global Information Management, 14(3), 59–89.

Dibbern, J., Goles, T., Hirschheim, R., & Jayatilaka, B. (2004). Information systems outsourcing: A survey and analysis of the literature. *ACM SIGMIS Database*, 35(4), 6–102.

Drazin, R., Glynn, M. A., & Kazanjian, R. K. (2004). Dynamics of structural change. In M. S. Poole & A. H. Van De Ven (Eds.), *Handbook of organizational change and innovation (pp. 168–170)*. Oxford, United Kingdom: University Press.

Gonzalez, R., Gasco, J., & Llopis, J. (2006). Information systems outsourcing: A literature analysis. *Information & Management, 43, 821–834*.

Gottschalk, P., & Solli-Sæther, H. (2006). Maturity model for IT outsourcing relationships. Industrial Management and Data Systems, 106(2), 200–212.

Grover, V., Cheon, M., & Teng, J. (1996). The effect of service quality and partnership on the outsourcing of information systems functions. Journal of Management Information System, 12(4), 89–116.

Hoover, N. (2009), Texas' data center consolidation project under scrutiny. InformationWeek. Retrieved from http://www.informationweek.com/news/221800216

Hyder, E. B., Heston, K. M., Paulk, M. C., & Hefley, B. (2009). eSourcing capability model for service providers (eSCM-SP). San Antonio, TX: Van Haren.

Kawamoto, D. (2004, September 15). JPMorgan Chase cancels IBM outsourcing contract. *CNET*. Retrieved from http://news.cnet.com/JPMorgan-Chase-cancels-IBM-outsourcing-contract/2100-1011_3-5367781.html

Kazanjian, R. K., & Drazin, R. (1989). An empirical test of a stage of growth progression model. *Management Science, 35, 1489–1503*

Kern, T. (1997). The gestalt of an information technology outsourcing relationship: An exploratory analysis. *ICIS 1997 Proceedings*. Retrieved from http://aisel.aisnet.org /icis1997/3/

Kern, T., & Willcocks, L. (2000). Exploring information technology outsourcing relationships: Theory and practice. *Journal of Strategic Information Systems, 9(4)*, 321–350.

Kern, T., & Willcocks, L. (2001). *The relationship advantage: Information technologies, sourcing, and management: Oxford, United Kingdom: University Press.*

Kern, T., & Willcocks, L. P. (2002). Exploring relationship in information technology outsourcing: The interaction approach. *European Journal of Information Systems, 11, 3–19.*

Lacity, M. C., & Hirschheim, R. (1993). Implementing information systems outsourcing: Key CIO issues and experiences of an early adopter. Journal of General Management, 19(1), 17–31.

Lacity, M. C., Hirschheim, R., & Willcocks, L. (1994). Realising outsourcing expectations: Incredible expectations, credible outcomes. Information Systems Management, 11(4), 7–18.

Lacity, M. C., & Willcocks, L. P. (2000). Relationships in IT outsourcing: A stakeholder perspective. In R. W. Zmud (Ed.), Framing the domains of IT management: Projecting the future through the past (pp. 355–384). Cincinnati, OH: Pinnaflex Education Resources.

Loesche, E. A., & Hefley, B. (2009). eSourcing capability model for client organizations (eSCM-CL). San Antonio, TX: Van Haren.

Loh, L., & Venkatraman, N. (1992). Diffusion of information technology outsourcing: Influence sources and the Kodak effect. Information Systems Research, 3, 334–358.

McDougall, P. (2005, May 16). Sears exits $1.6 billion outsourcing deal with CSC. *Information Week*. Retrieved from http://www.informationweek.com/sears-exits-16-billion-outsourcing-deal/163104047

McDougall, P. (2012, June 23). Texas hands troubled IBM contract to CapGermini, Xerox. InformationWeek. Retrieved from www.informationweek.com/news/government/state-local/232602653

McGarrah, L. (2011, February 3). The pitfalls of outsourcing IT. News Observer. Retrieved from http://www.

newsobserver.com/2011/02/03/964100/the-pitfalls-of-outsourcing-it.html

McGee, M. K. (2003, September 22). Health care & medical: Tech innovation keeps the doctor in. *Information Week*. Retrieved from http://www.informationweek.com/health-care-medical-tech-innovation-kee/14800196

Miller, R. (2010, August 23). IBM blames Texas agency for contract woes. *Data Center Knowledge*. Retrieved http://www.datacenterknowledge.com/archives/2010/08/23/ibm-blames-texas-dir-for-contract-woes/

On the case: Out of the box talk: Rick Mears: Innovation at Owens & Minor [Video file].(2011, November 11). *Dell World*. Retrieved from http://www.enterpriseefficiency.com video.asp?section_id=1467&doc_id=235672

Parry, E. (2004, August 18). A CIO conversation: Owens & Minor's David Guzman. *Search CIO*. Retrieved from http://searchcio.techtarget.com/news/1001105/A-CIO-Conversation -Owens-Minors-David-Guzman

PricewaterhouseCoopers. (2008). Outsourcing and shared services—From providers to partners: How outsourcing relationships are changing for the better. *View, 2008*(Summer). Retrieved from http://www.pwc.com/us/en/view/assets/pwc-view-summer08-outsourcing.pdf

Quinn, J. B. (1999). Strategic outsourcing: Leveraging knowledge capabilities. *Sloan Management Review, 40(4)*, 9–22.

Rossi, S. (2007, February 7). Survey: Failed outsourcing deals blamed on people, not SLAs. *Computerworld*. Retrieved from http://www.computerworld.com/s/article/9010658 /Survey_Failed_outsourcing_deals_blamed_on_people_not_SLAs.

Seo, Y-W., Han, H-S., & Lee, J-N. (2005). A relationship perspective to investigate the effect of human resource capacity on information system outsourcing success. *Research and Practice in Human Resource Mangement, 13*(2), 1–15.

Simkova, E. (2005). Service level management and its link to CobiT's. *SYSTÉMOVÁ 58 INTEGRACE 2/2005*, 59–75.

Solli-Sæther, H., & Gottschalk, P. (2010). The modeling process for stage models. *Journal of*

Organizational Computing and Electronic Commerce, 20, 279–293.

Towns, S. (2012, June 16). Texas warns IBM of outsourcing contract failures. *Public CIO. Retrieved from http://www.govtech.com/pcio/Texas-Warns-IBM-of-Outsourcing-Contract.html*

Young, A., Anderson, D. S., Brant, K. F., Brown, R. H., Cohen, L. R., Cournoyer, S. . . . Sood, R. (2008). *Gartner on outsourcing, 2008–2009*. Stamford, CT: Gartner.

Teaching and Learning Objectives:
The First Step in Assessment Programs

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ABSTRACT

Currently traditional institutions of higher learning are facing more robust competition from alternative educational programs and non- traditional institutions offering certificates and degrees. In addition to this competition the programs offered by the traditional institutions of higher learning are being called into question by graduates; the parents of graduates and the potential employers of these graduates. Parents and graduates are questioning the cost /benefit of a college degree and employers are discounting the relevance of a GPA as an attribute for entry level positions. The authors briefly discuss the introduction of the Collegiate Learning Assessment Test (CLA+). The test is designed to be administered to graduating seniors and the test results will serve as evidence that a graduate possesses the skills considered to be essential by potential employers. The authors point out that the CLA+ is a summative assessment measure. They contend that assessment programs must also include formative assessment measures. The authors propose that assessment programs should be a continuing component of each and every class within each and every degree program offered by the traditional institutions of higher learning. Formative assessment efforts must begin at the level of the individual class and must be linked to statements of both teaching and learning objectives relevant to the course content. From an analysis of syllabi that were used in an introductory Marketing course, the authors have chosen to illustrate unsuitable teaching and learning objectives The authors point out the necessity of informing faculty members about the elements of effective and measurable teaching and learning objectives. The authors then present a series of teaching and learning objectives derived from their experience in revising an important introductory or portal course. .Finally, the authors contend that the structure and language of the teaching and learning objectives presented in the article can be generalized to programs and courses in a variety of academic disciplines and offer some suggestions for the conduct of assurance of learning (assessment) efforts.

INTERNAL PRESSURE FOR ASSESSMENT (ASSURANCE OF LEARNING)

Assessment, or better defined as Assurance of Learning Programs, were initially conceived and implemented by institutions of higher learning as a means of empirically illustrating that they were achieving the goals and objectives they had set for their programs. Earlier on, one could say that the impetus for these programs was internally generated. Somewhat later in time, accrediting agencies began to demand that institutions seeking initial accreditation or reaccreditation produce a systematic body of findings that clearly demonstrated the linkages between students' learning or performance outcomes and the goals and objectives the institution had formulated and made public.

EXTERNAL PRESSURE FOR ASSESSMENT (ASSURANCE OF LEARNING)

More recently institutions of higher learning have had to contend with additional external pressures stemming from a number of sources. Because they recognize the importance of the goals and objectives that many institutions of higher learning have designated as critical, government agencies that offer grants and current or potential corporate and individual donors who provide funds for the introduction of new and the maintenance of existing specific or general programs are insisting that institutions requesting such funding present evidence of assessment outcomes that indicate the goals and objectives made explicit in their mission statements are being met.

Institutions of higher learning have also experienced an increasing level of dissatisfaction expressed by graduates who find themselves deeply in debt (Salas & Loren 2014) and experiencing limited career opportunities because of a slow growth recessive economy. These graduates are experiencing a kind of cognitive dissonance (Festinger 1957) or buyer remorse and are evaluating the cost /benefit ratio of some college degree programs as negative.(The Week 2014) As one might expect, these graduates are joined in their dissatisfaction by parents who have had to absorb the ever increasing costs of tuition, fees and other expenses.

Additional competitive pressure comes from the growing popularity of what are known as Massive Open Online Courses or MOOC being offered by some very prestigious institutions of higher learning. Currently MOOCS are offered online and have essentially open enrollment with no limits on the number of individuals who can participate in all or parts of the courses offered. Also to be considered is the growing importance of "for profit" institutions that promote the more focused on line or in resi-

dence campus programs that they offer as having a direct connection with career employment opportunities. (Bady 2013; Savage 2013)

Traditionally considered as feeder schools for universities and colleges, the two year junior colleges, whose programs are funded by government at various levels, have been advised to adopt a near a near trade school mission and to offer more in the way of employment oriented programs. (Cancino 2013). Robert B. Reich has recently called for schools within the USA to adopt Germany's two year programs in manufacturing technologies.. These programs, beginning in the last year of high school and extending at least one year beyond, have successfully created employment opportunities for those students who are not interested in traditional college and university programs. These programs are reported as having a role in strengthening the German economy. (Reich 2013).This call for such programs was echoed in a longer article originally appearing in the *Washington Post* and reprinted in the *Chicago Tribune* (Schneider 2014).

THE ENTITLEMENT PERCEPTION PARADOX

Student perception of entitlement creates another problem in institutions of higher learning. The rationale for the perception of entitlement seems linked to the ever increasing costs of tuition and related expenses. Students are reported to have adopted a point of view in which they define themselves as "customers" and as such should dictate the outcomes of the educational transactions in to which they enter. (Schaffer, Barta & Stogsdill 2013) On the other hand, in the authors' experience, faculty members may vary in their expression of opinions regarding entitlement, but most business school faculty members, implicitly or explicitly, regard students not as customers but as the products that the institution produces. .

Where there is an absence of statements of specific learning (performance) objectives, students may tend to construct their own rubrics of fairness and their own perceptions of reality. For example, every faculty member has heard a student complain about a final grade and claim to deserve a higher grade because they studied hard; they were really motivated; they need to keep their GPA up; they attended most of the classes; they offered comments during discussion and so on and so on. Where there are defined and implemented objectives regarding the level of performance students are expected to demonstrate, the differences between what the students consider adequate performance and the levels of performance outlined in the course learning objectives may operate to eliminate or, at the least, lessen the entitlement frame of mind.

As mentioned above, students believe that accumulating a high GPA constitutes empirical evidence that they possess the abilities and skills required for entry into their chosen career fields. Some faculty members share that belief and will inflate grades because they think this will satisfy the graduates and provide them with a competitive advantage in what has recently become a climate marked by greater difficulty in the competition for employment opportunities. The motivation for such grade inflation may, in some instances, be engendered by political correctness or more simply and genuinely by a desire to be of assistance. In either case, or whatever else the motivation for grade inflation may be, the result seems to be the introduction of a paradoxical unintended consequence.

At one time potential employers might have shared a belief in the reverence for and the relevance of the GPA. A significant number of potential employers have, however, reported the experience of finding that students with high GPAs–even those from prestigious institutions of higher learning -cannot demonstrate an acceptable level of proficiency in what the employers recognize as skills such as basic mastery of content; a facility with quantitative methods; critical interpretive thinking and proficiency in both oral and written communications. (Belkin 2013)

Writing in the *Wall Street Journal*, Belkin (2013) also pointed out that a number of corporations have used assessment instruments of their own origination as a means of assuring that applicants are capable of, for example, writing well and making a rational argument. He quoted a senior vice president of a major corporation as saying that these abilities are often lacking even for students whose transcripts show a record of with high grades from prestigious schools. Belkin (2013) also reported that students who had no immediate intention to enter graduate programs had completed the GRE or GMAT and presented the resulting test scores to potential employers as evidence that they possessed critical skills and abilities discussed above.

THE COLLEGIATE LEARNING ASSESSMENT (CLA+) TEST

As discussed above there have been reports that potential employers of college graduates have begun to devalue the worth of some college degrees and to express skepticism about the credibility GPA's offered by applicants seeking employment.

In response to the skepticism surrounding the GPA as credible evidence of learning, there is a movement toward using a standardized post-graduation examination. Just as the SAT is used to establish that an applicant has the skills necessary for admission to a college or univer-

sity, the proposed standardized test is designed to provide evidence that graduates have achieved a level of mastery of the knowledge and skills frequently specified in institutional statements of assessment objectives and, just as importantly, considered as requisite entry level skills by potential employers.

The post- graduation test is called the Collegiate Learning Assessment (CLA+) Developed by The Council for Aid to Education. The test has been used by 700 schools as a means of assessing how well the students at various levels are mastering requisite content and skills that are the objectives of higher education. (Klein, Benjamin, Shavelson & Bolus 2007; Chun 2010 Hosch 2012)

The purpose of the CLA + is to provide a student who successfully completes the test with a benchmarked report. The report can be considered evidence that the student who has taken and passed the test possesses a satisfactory measure of important skills such as mastery of content, ability in written communication and the capability for critical thinking. If not all, then certainly the great majority of institutions of higher learning, list the development of the aforementioned skills as desirable outcomes of the educational programs that they offer. And as noted above, these are the skills of particular interest to potential employers

Current plans for the Spring of 2014 call for seniors at 200 cooperating colleges to take the Collegiate Learning Assessment (CLA +) test. The test results will serve to supplement the GPA and other experiential evidence that applicants for employment submit as a components of their resumes.

FORMATIVE AND SUMMATIVE ASSESSMENT MEASURES

Assuming that the CLA+ test proves to be accepted and effective raises the question of whether institutions of higher learning will decide to adopt the test as a requirement to be completed by graduating students and the resulting score incorporated into the students' transcripts. A second question deals with whether the schools that adopt the CLA+ would, as a result of such adoption, consider abandoning their own internal assessment efforts and programs. This would mean that the institutions might very well come to rely exclusively on the CLA + and so, in a sense, outsource the work involved in providing evidence of the assurance of learning to an outside agency.

With regard to the issue of outsourcing, it is hard to imagine that a standardized test would be accepted as a sort of a universal one size fits all measure considered to be applicable to all college or university programs. In an effort to achieve a closer fit between the content of the CLA +

and the content of their programs, institutions of higher learning might propose a supplement to the CLA+ that entails the development of additional or alternative items to those in the standardized test. The objective of such additions, deletions and alterations of test items would be justified by an argument that these changes yielded information that is more focused and more relevant to the specific programs offered by the institution.

 The problem with revising a standardized test by the addition, deletion or alteration of test items is that it violates the central norms of psychometric testing. If the original test is in any way revised, then the important attributes of its reported reliability and validity which traditionally insure the credibility of the results yielded by the test can no longer be applied. Whenever a standardized test is revised the reliability and the validity measures of the revision must be recomputed. (Campbell & Stanley 1966; Kassarjian1971)

It seems very likely that the CLA+ will prove to be an innovative and welcome addition as a supplement to assessment programs that are conducted within institutions of higher education. Individual class assessment measures administered over a program of study could be considered as formative measures. The results derived from administration of the CLA+ could, on the other hand, very well be considered to represent a summative measurement of assurance of learning. Considered together the formative and the summative measurements should supplement one another. (Centra1987) The combination of the two measurements should provide stronger supporting results. The results could then be presented as evidence of an active and sustained program for the assessment of student learning. Further the results would support the institution's mission and its vision of the knowledge and skill levels that its graduates should possess. References to the importance of the relationship between a mission statement, the goals and objectives an institution derives from it and the eventual outcomes achieved are ubiquitous. For example, even in a recent novel by Lee Child the central character says "That's no kind of mission planning"." A mission needs an achievable objective."(Child 2013 p.317). A view of the necessary features of a well stated objective is provided in Doran's (1981) classic article on the subject.

OBJECTIVES

 Faculty members need to be aware of those teaching and learning objectives that are of primary importance to supporting the mission of the institution that the faculty members represent. It should be noted that in examining the publications distributed to constituents by institution of higher learning one finds statements which incorporate a multiplicity of objectives. The University states its

overall objectives, colleges within the university have their objectives, departments within the colleges have their objectives; programs within the departments have theirs and individual faculty member have their objectives. University objectives frequently deal with fund raising efforts; enrollment programs; issues of diversity in the student population and faculty mix; remodeling the physical plant programs and so on. College, departmental and individual course objectives should deal with the teaching intentions of the faculty members and the objectives that specify the learning (performance) outcomes expected of students.

IMPLEMENTATION OF FORMATIVE ASSESSMENT PROGRAMS

The formative–summative delineation of assessment outcomes mentioned above assumes that institutions of higher learning have implemented an active and sustained program for the assessment of student learning. That is not always the case.

Some years ago our college assessment committee had its members contact approximately 50 colleges that the committee considered similar to our own and to inquire about the details of the assessment programs currently in place at these schools. Our intention was to establish some benchmarks against which we would compare our own program plans. The senior author was a member of the committee. Of the schools we contacted fewer than 10% of could honestly report anything that resembled a systematic program for assessment.

 Each of the representatives our members contacted agreed that assessment was considered important by their institutions. Many of them reported that, with regard to assessment, they were planning to create a program or they were thinking about planning a program or they were planning to think about planning a program.

It seemed to us that these intentions to get started on a formal program of assessment had all the weight of the great majority of New Year resolutions. This and other experiences and discussions within our own college and with other schools confirmed the proposition that everyone believes assessment is important. The people we'd spoken to reported that they and their faculty colleagues were favorable toward the concept of assessment and the importance of an assessment program: they seemed to object only to its implementation.

ASSESSMENT: A STARTING POINT

There is an often cited quotation attributed to the Chinese philosopher Lao-tsu that reads: "A journey of a thou-

sand miles begins with a single step". There are questions about whether Lao-tsu ever really existed but there are no questions about the veracity of the quotation. The important issue really is whether the first step is in the right direction: forward as opposed to oblique or sideways or in a circle. The figurative first step is the foundation of the journey. The literal first step is the foundation of all plans, programs and strategies. These first steps are the objectives that the plans, programs or strategies are expected to achieve. In this brief paper we discuss the importance of first steps in the creation and implementation of assessment programs. The senior author and colleagues have elsewhere made the case that assessment activities should be an integral part of each course in a university or college degree program (O'Keefe, Hamer & Kemp (2012, 2013)

In the papers cited above the authors expressed the view that assessment, beginning at first as a series of formative measures, could, over time, evolve into a summative program. At the time these papers were submitted for publication work on the CLU+ was underway and this work was cited in the reference lists but, as far as the authors knew, the test was not yet ready to be administered to graduating students at all institutions of higher learning. The authors (O'Keefe, Hamer & Kemp 2013) illustrated how the measurement outcomes relevant to the learning objectives formulated for an introductory class were related to the learning objectives stated by our university.

The authors advanced the premise that there should be a demonstrable relationship between the teaching and learning objectives prescribed for a given class. Measurements that exhibited acceptable levels of competence in meeting the learning objectives of individual courses should be reported. Because the course learning objectives were aligned with the overall educational objectives stated in the institution's mission statement, the alignment should allow measurements that would provide evidence for the assurance of learning. The authors O'Keefe, Hamer & Kemp (2012, 2013) also took issue with the frequently expressed viewpoint that, in and of themselves, final course grades and the final GPA provided a sufficient measure of assessment. As we noted earlier a significant number of potential employers have also actively disputed this viewpoint.

The starting point—the first step—in building a credible program for the assessment and assurance of student learning requires that each and every course in each and every program offered by each and every department within a college include in the course syllabi a listing of both the teaching and the learning objectives agreed to be relevant to that course. That demand sounds both obvious and easy. In the section to follow we document that, in the process of revising an introductory course, it was neither

obvious nor was it easy for faculty members to formulate sound teaching and learning objectives.

The process of revising our introductory or portal course (Berry, Cook, Hill & Stevens, 2013) involved the program of sequential activities that are outlined in Table 1. (O'Keefe & Lopez 2013) Our department offers between eight or nine sections of our introductory course in each of three academic terms and an additional four to six sec-

TABLE 1
STEPS IN FORMING COURSE TEACHING AND LEARNING OBJECTIVES
1. The committee members collected a representative sample consisting of 13 syllabi that had been used for the 301 course.
2. The syllabi were deconstructed into sections dealing with: Textbooks; Teaching and Learning Objectives; Content; Examinations & Projects.
3. A content analysis was performed in the interests of listing similarities in the Teaching and Learning objectives listed in the syllabi.
4. The completed list was distributed to instructors scheduled to teach the course over the coming year. The instructors were asked to delete inappropriate objectives.
5. Based on the outcome of the first evaluation round, a second list was assembled and forwarded to faculty who were asked to accept or reject the inclusion of the objectives in the course syllabus.
6. The results of the vote were distributed to the faculty members scheduled to teach the revised course.
7. The chair contacted the faculty members to inform them that no objectives related to oral and written communication had been included in the list so far compiled. The chair reminded the faculty that improvement in communication skills was a University objective.
8. The chair communicated with the faculty members and pointed out similarities and differences and drew attention to the significance of differences between Teaching and Learning objectives.
9. The chair submitted final lists of Teaching and Learning objectives to be considered for inclusion in the common course syllabus.
10. The faculty members endorsed the lists of Teaching and Learning objectives compiled by the committee members.

tions over two Summer school periods. A number of these course sections are assigned to adjunct faculty. We began by collecting copies of syllabi used by faculty over the most recent two year period. The syllabi were deconstructed and, for purposes of comparison, divided into content areas. We compared the texts that were assigned; the organization of the course; the additional reading materials; the projects assigned and the teaching and learning objectives listed in each syllabus. In deconstructing the syllabi that were in use we expected to allow that there would be variations attributable to what could be interpreted as academic freedom. The comparative results of our deconstruction efforts yielded a state of affairs that seemed well beyond what we understood to be academic freedom and tended to be closer to academic anarchy.

An introductory or portal course sets the direction for the remainder of the students' programs of study. The topics and applications presented in the introductory courses must be relevant for those students who intend to major in the field of study represented by the course as well as for those students for whom the course serves as a requirement for the completion of their degree program. That perspective demands an effort toward assuring an agreed upon degree of standardization of the content offered in all sections of a portal course such as Marketing 301 and the portal courses offered by each of the departments within the college. Because of variations in the experiences and preferences of the instructors assigned to teach a portal course, complete uniformity of all aspects of the course is simply not possible. The tradition of academic freedom supports these essentially minor variations in the flow and coverage of topics within the course.

Similarities in the majority of the key components of the introductory course, however, are possible and worth pursuing. Our efforts to revise our introductory course resulted in the adoption of a uniform text; agreement on the essential and discretionary topics to be covered and agreement on the structure and substance of assigned written reports. These results were achieved because, before anything else, we arrived at standardized sets of teaching and learning activities.

This first step involved a thorough examination and content analysis and evaluation of the teaching and learning objectives incorporated into existing course syllabi.

The teaching and learning objectives seen in Table 2A and 2B were taken from the syllabi we had collected and deconstructed. These were presented to a group of seven experienced full time faculty members for evaluation. The authorship of these objectives was kept anonymous. We asked the faculty members to vote on whether an objective should be given further consideration. Tables 2A and

2B exhibit a number of the objectives that were immediately rejected and the rationale behind their rejection.

The problem with almost all of the statements presented in Tables 2A and 2B is that, rather than statements of measurable teaching and learning objectives, they are little more than statements of intentions. They are well meaning statements but as objectives they are meaningless. To be considered as valid, teaching objectives should

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TABLE 2A
SOME EXAMPLES OF
UNSUITABLE TEACHING (T) OBJECTIVES
(FROM A COLLECTION OF MARKETING 301 SYLLABI)

1. Knowledge of how marketing operates in the individual organization.
2. The ability to apply your knowledge of marketing operations in both the domestic and the international market environment.
3. An insight into how marketing can help you personally.
4. You will understand the role of marketing within society and within an economic system.
5. Enjoy learning how to develop skills in researching about organizations and their industries.*
6. Learn how to present oral and written marketing materials.
7. Learn basic marketing strategies including SWOT analysis.

TABLE 2B
SOME EXAMPLES OF
UNSUITABLE LEARNING (L) OBJECTIVES
(FROM A COLLECTION OF MARKETING 301 SYLLABI)

1. Develop effective oral and written communication skills.
2. Develop team skills in solving business problems.
3. Students will develop an understanding of the fundamental upstream and downstream issues that confront firms along the value chain.
4. Have fun while developing an understanding of the fundamental concepts in Marketing.*
5. Find out how organizations analyze marketing strategies and competitor analysis.
6. Learn how to present oral and written marketing materials.
7. Apply the basic elements of marketing strategy to business challenges and exploit the relationship between these elements.

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be broad statements of what the instructor intends to accomplish and include the means by which he or she is to pursue that accomplishment. A valid learning objective is built around the methods and the actions involved in collecting and analyzing act tangible evidence of students' performance that verify the instructors' stated intentions. The actions discussed here are illustrated in the classic traditional model of communication which is presented as Figure 1.

THE TRADITIONAL COMMUNICATION MODEL: TEACHING AND LEARNING OBJECTIVES.

Figure 1 represents the traditional phases of the communication model as presented in introductory marketing texts, for example, (Boone& Kurtz, 2012 and Kotler

and Armstrong 2013). In the framework of the model the sender (the instructor) encodes the message to be delivered to the receiver (the student). Encoding means simply organizing the course materials in a form that the instructor assumes the students can understand. The instructor must choose a medium to use in presenting the materials. The objectives we list in Tables 3A and 3B of this report make specific reference to a number of presentation media. Note that the teaching objectives in Table 3A specify a variety of media choices: lecture discussion sessions supplemented by text materials; readings; case studies; video and other audio visual presentation materials. The students are expected to encode the information presented via these media sources and to provide feedback that validates that the information has been understood. As shown in Table 3B the feedback takes the form of the

FIGURE 1
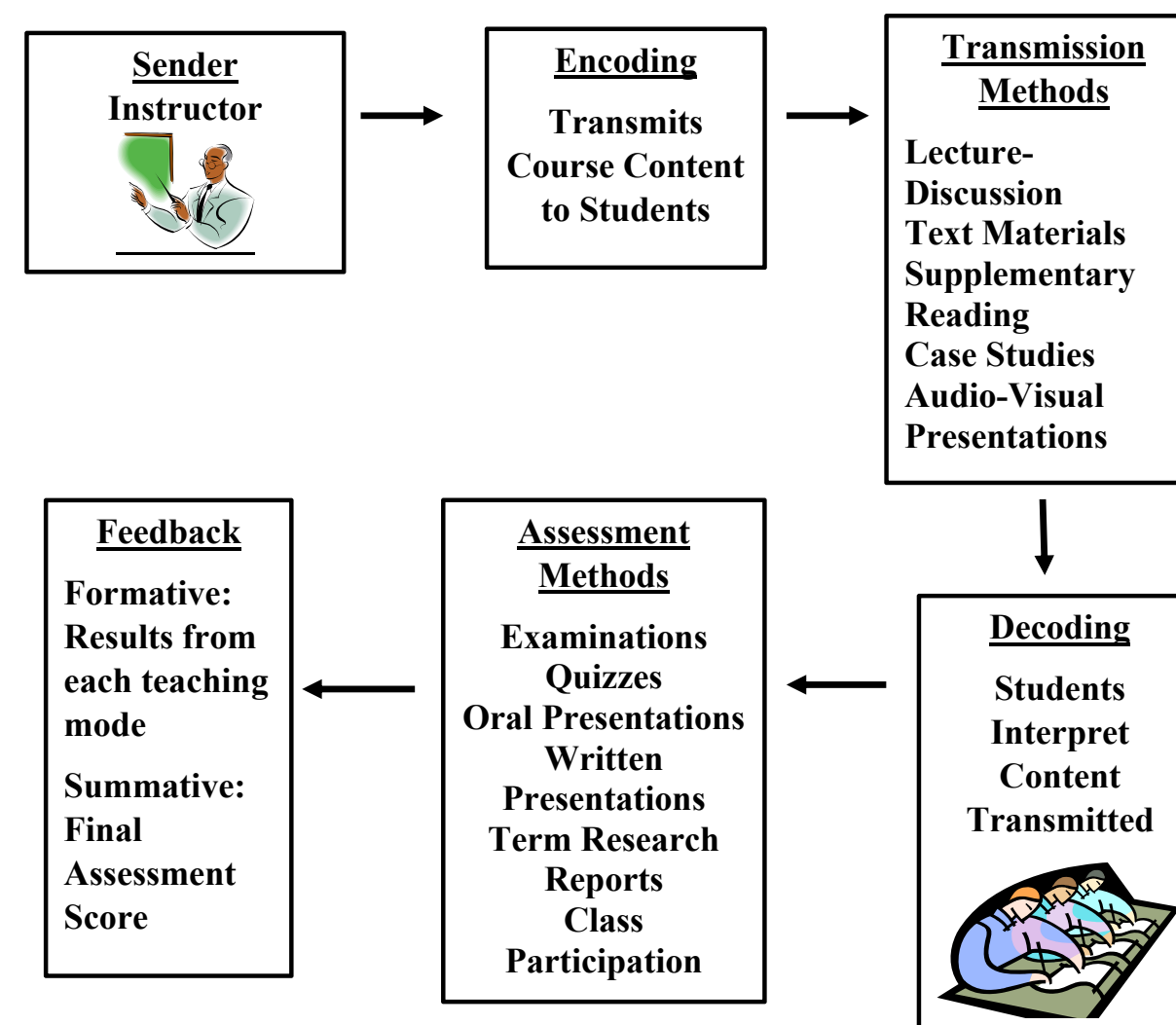**A COMMUNICATIONS MODEL RELEVANT TO ASSESSMENT**

TABLE 3A
TEACHING OBJECTIVES PRESENTED IN THE REVISED SYLLABUS

By employing lecture-discussion sessions; text materials; readings; video and other audio visual presentation materials presented to students, instructors teaching Marketing 301 will direct students toward:

1. Developing an understanding of the fundamental concepts involved in marketing planning and programs.
2. Developing an understanding of the vital role of marketing planning and programs within a firm.
3. Developing an understanding of the relationships between marketing and other functional areas of business.
4. Developing skills in scanning the external environment and appraising internal perspectives for measuring the strengths and weaknesses of a business from a marketing viewpoint.
5. Developing skills in the analysis of competition in the planning and analysis of marketing strategy.
6. Developing an understanding of the informational and analytic sources of information necessary to the preparation of marketing plans.
7. Developing an understanding of the critical role of oral and written communication skills in business practices.

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student's performance on examinations; quizzes; oral and written assignments; reports and class participation. These measures are the operational definition of assessment or assurance of learning

Table 3A includes the seven teaching and Table 3B the seven learning objectives that the members of our course revision team agreed would be presented in the syllabi for each section of the revised introductory course. The point to note is that, as presented, the teaching and learning objectives make a distinction between what is expected of the instructor and what is expected of each student. The instructor, via the array of course materials that are assigned and presented using several media, directs the students to the key points of the class and the students, via a variety of related performance measures, demonstrate mastery of those key points.

It should be noted that the statement of each teaching objective begins with the key word *"direct"* and each learning (performance) objective begins with the key word *"demonstrate"*. There are seven teaching objectives and

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seven learning objectives. We considered that outcome as a tribute to George Miller's (1956) classic article about the magical number seven.
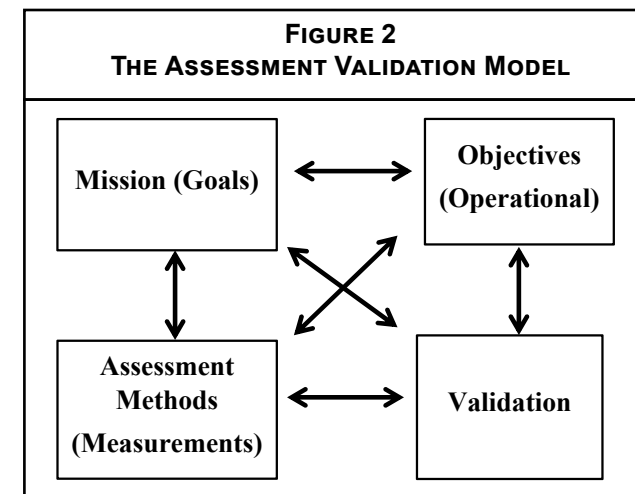
Figure 2 shows the generalized assessment validation model. The mission of the college or university suggests the measurable objectives. The objectives dictate the methods needed to provide evidence that validates a pre-determined range of results that are considered to be evidence of assurance of learning. The institution's mission statement expresses its superordinate goals. From these goals instructors derive the overall teaching and learning objectives for the classes they are assigned to teach. Validating the achievement of the learning objectives requires that these objectives are operationally defined that is, they lend themselves to acceptable measurement methods. The outcome of these measurements must provide documentation that the stated assessment (assurance of learning) objectives have been met. As the model points out, its major elements are symmetrical and mutually supportive. The learning objectives stated for each individual class are derived from the goals explicitly declared in the institution's mission statement.

TABLE 3B
LEARNING OBJECTIVES PRESENTED IN THE REVISED SYLLABUS

As measured by examinations; quizzes; oral and written environmental scanning and planning assignments; reports and class participation, students completing Marketing 301 are expected to:

1. Demonstrate the ability to recognize and to recall basic marketing terms and concepts.
2. Demonstrate familiarity with the basic elements of marketing plans and marketing strategies.
3. Demonstrate an understanding of the controllable and the uncontrollable variables relevant to the success or failure of marketing programs, strategies and tactics.
4. Demonstrate an understanding of the role of competitive advantage in the formulation of marketing plans, strategies and programs.
5. Demonstrate the ability to bridge concepts discussed in text materials and these same concepts appearing in both academic and practitioner publications and in the popular press.
6. Demonstrate the ability to locate and integrate informational and analytic sources of information.
7. Demonstrate effective oral and written communication skills in articulating business reports.

FIGURE 2
THE ASSESSMENT VALIDATION MODEL

The objectives are consistent with the mission statement; the measures used to establish assurance of learning are consistent with the objectives. An outcome that provides acceptable evidence of the assurance of learning validates the objectives stated for the class and those stated by the institution's mission.(O'Keefe, Hamer & Kemp 2012;2013).

In the approach discussed in this paper our objectives deal with three primary elements. We set out to assure that via a testing protocol common to and consistently measured within all sections of the introductory course we could show assurance of *Mastery of Content*. Further, as shown in Table 4, we set out to assure that within all sections there would be common assignments that would allow us to demonstrate assurance of both *Critical Thinking* and *Improvement in Communication Skills*. These objectives are important components our own and of any number of mission statements put forward by institutions of higher learning. Beyond that, as discussed earlier in this paper, these objectives are relevant to the skills that employers evaluate as requirements for career entry and development.

In summary we suggest that, within all academic disciplines, instructors assigned to teach a given class, cooperate by coming to conclusions regarding the common objectives they will work to accomplish and the methods they will use in pursuit of those objectives. And once the teaching objectives are set the instructors must agree on common methods for measuring student performance. The outcomes of these performance measures can then be considered as evidence of assurance of learning. In what follows we add some additional suggestions formulated during the course revision process discussed in this paper.

TABLE 4
FURTHER INFORMATION REGARDING COURSE AND ASSESSMENT IMPLEMENTATION

The following points were communicated to faculty members scheduled to teach the revised 301 course.

1. We will be using a customized text.
2. The syllabus must contain the seven teaching objective and seven learning objectives agreed upon by the committee.
3. The choice of content to be presented is not completely discretionary.
4. Concepts agreed by the committee to be "essential" must be included.
5. The arrangement of the chapters to be presented is left to the individual faculty members.
6. Common test questions incorporated as a series of SRAIs (quizzes) will assure coverage of essential topics and will provide an empirical base for an assessment report. Students must submit an individually prepared Environmental Scan report.
7. Students will submit an individually prepared Environmental Scan report.
8. Student groups must submit a Marketing Plan reports
9. Outlines for both the written reports must be included in the course syllabus.
10. Implementation will commence in the Autumn Quarter of 2013/14.

Other Suggestions:

The institution should make assessment as important an activity as recruiting and development.

The institution must create an organizational and administrative function that oversees assessment programs.

In cooperation with its program and departmental administrators the institution must assure that formative assessment measures are a component of each course.

Departmental and program administrators must assure that, especially for their introductory and portal courses, all instructors agree on both the teaching and learning objectives and on the methods to be used to document assurance of learning.

The Institution should study the outcome of admin-

istrations of the CLA+ examination.

Each department or program should decide on a method for a summative assessment to assure that students preparing to graduate can demonstrate mastery of content. Students who successfully demonstrate a level of knowledge of content and skills prescribed by the departmental or program faculty, should be presented with a certificate documenting that achievement.

Finally, the department and program administrators should require that students maintain an E portfolio of coursework assignments and projects that, along with the certificate mentioned above, can be presented to potential employers as an experiential supplement to their transcripts and resumes.

REFERENCES

Bady,A. (2013) The MOOC movement and the end of reform. *Liberal Education, 99,4.*

Belker,D. (2013). Are you ready for the post-college SAT?: Employers say they don't trust grade –point averages. *The Wall Street Journal. Sunday 8/25.*

Berry, T., Cook, L., Hill, N. T. & Stevens, K.T. (2013) Success in gateway business courses: What matters and what can we do? *Journal of Learning in Higher Education* 9,1, 19-24.

Campbell, D.T. & Stanley J.C. (1966). *Experimental and quasi-experimental designs for research.* Chicago: Rand McNally College Publishing Company.

Cansino, A. (2013). Creating a new model for factory workers: Daley College director combines technology, manufacturing, liberal arts to create next generation of leaders. *Chicago Tribune :Busines,* pt. 25, 1&4.

Centra, J.A. (1987) Formative and summative evaluation: Parody or paradox? In L.M. Aleamoni (Ed.) *Techniques for evaluating and improving instruction: New directions for teaching and learning.* San Francisco: Jossey-Bass.

Child, L. (2013). *Gone tomorrow: A Jack Reacher novel.* NewYork: Dell Mass Market Edition, ch.49 p.317.

Chun, M. (2010) Taking teaching to (performance)task and linking pedagogical and assessment practices. *Change: The Magazine of Higher Learning* 42,2,22-29.

Doran, G.T. (1981). There's a **SMART** way to write management goals and objectives. *Management Review,*70, 11, 35-36.

Festinger, L. (1957). A theory of cognitive dissonance. New York: Row, Peterson

Hosch, B.J. (2012) Time on test, student motivation and performance on the Collegiate Learning Assessment. *Journal of Assessment and Institutional Effectiveness,* 2,1, 55-76

Kassarjian, H. H. (1971). Personality and consumer behavior: A review. *Journal of Marketing Research*, VIII, Nov. 409-418

.Klein ,S., Benjamin, T., Shavelson, R. & Bolus, R. (2007) The Collegiate Learning Assesssment: Facts and fantasies. *Evaluation Review31,5 415-439.*

Miller, G. A. (1956) The magical number seven plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63 (2) 81-97.

O'Keefe R. D., Hamer L. O. & Kemp, P.R. (2012). The assessment validation model: Linking course level assessment activities to program level assessment. *Proceedings of the ICLHE Conference.* Nashville TN, May 23-25,159-166.

O'Keefe R., Hamer, L.O., & Kemp, P.R. (2013). Linking course level assessment activities to program level assessment. *Journal of Learning in higher Education*, 9, 1, 163-169.

O'Keefe R.D. & Lopez J. (2013). Revising Marketing 301: Standardizing course objectives; reading materials and written assignments. *Working Paper: Department of Marketing, Driehaus College of Business, DePaul University.*

Reich Robert B. (2013). What America needs now: For American production to thrive we should follow Germany's lead. *Parade Magazine,* September 1, p.12.

Salas,C & Lorin, J. (2014) The next big threat to the US economy. *Bloomberg Businessweek, January 20, 10-11.*

Savage, C.M. (2013). Dark matter: On line education and organizational dynamics. *Journal of Higher Education Theory and Practice,* 13,2,76-83.

Schaefer. T, Barta, M. & Stogsdill, M. (2013). The *you owe me!* mentality: A student entitlement perception paradox. *Journal of Learning in Higher Education,* 9,1, 79-91.

Schneider, H. (2014) Focus Apprenticeships: Tinkering with a European import. *Chicago Tribune,* Section 2, Dec.18, 4.

The Week (2014) Education: Is college still worth it? January 24, p.32

A Comparison of Student Retention and First Year Programs Among Liberal Arts Colleges in the Mountain South

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INTRODUCTION

Institutional administrators in higher education struggle with student attrition and work to develop programs and support mechanisms to boost retention (Derby & Smith, 2004; Jacobs & Archie, 2008; Tinto, 1993). Half of all students who do not persist in college drop out by the end of the first year and do not return (Tinto, 2002). This has led to increased efforts by colleges and universities to develop, refine, and sustain first year student programs and services (McPherson, 2007). The most important factors in increasing student retention are interaction with other members of the campus community, including faculty, staff, and peers, as well as successful student integration into the social and academic fabric of the campus are (Astin,1993; Tinto, 2002).

First year students, like all students at a university, comprise a diverse mixture of personal traits, backgrounds, experiences, and assorted learning styles. Each of these unique student characteristics can either enhance or inhibit successful integration to the campus community (Choy, 2001; Pascarella & Terenzini, 1983). Thus, academic and social integration are the most important factors in predicting successful incorporation with the institution and persistence from the first year to the second (Cabrera, Nora, & Castaneda, 1993; Ishitani, 2003).

Institutions have developed and refined comprehensive support programs aimed at encouraging and supporting academic and social excellence to assist students in this navigation (Nava, 2010). These programs are commonly referred to as first year programs,

Historically, first year programs coalesced around the common theme of college adjustment in the freshmen year. Professionals working with new students became more intentional about sharing best practices and strengthening the national conversation on the topic of structured orientation programs and the academic experience in the freshman year, including special seminar courses (Brown, 1981).

BACKGROUND OF THE STUDY

First year programs are defined as institutional efforts aimed at successfully integrating new students into the academic and social fabric of an institution, as well as, efforts aimed at reducing attrition through positive and plentiful interaction (Astin, 1993; Tinto, 2002). Institutions are not required to offer first year programs, yet many find them to be important to student success and retention. The ultimate goal of first year programs is to promote and enhance student success.

STATEMENT OF THE PROBLEM

The purpose of this study is to evaluate the impact of various first year programs on student retention. The study will examine the following first year programs: Summer Bridge Programs, Pre-Term Orientation; Outdoor Adventure Orientation, Targeted Seminars; Learning Communities; Early Warning/Early Alert Systems; Service Learning; Undergraduate Research; and Assessment. The presence or absence of these first year programs were compared to the retention rate of first year students at several liberal arts colleges in the Mountain South, a region in the southern Appalachian Mountains of the United States.

RESEARCH QUESTIONS

Nine first year program components and the retention rates for first year students at six liberal arts colleges in the Mountain South were the variables examined in the study. Retention rates were determined using fall-to-fall enrollment information. The study addressed the following research questions:

RQ1: Is there a significant difference in the retention rates of institutions that have Summer Bridge Programs and the retention rates of institutions that do not have Summer Bridge Programs?

RQ2: Is there a significant difference in retention rates of institutions that have Pre-Term Orientation and the retentions rates of institutions that do not have Pre-Term Orientation?

RQ3: Is there a significant difference in retention rates of institutions that have Outdoor Adventure Orientation and the retention rates of institutions that do not have Outdoor Adventure Orientation?

RQ4: Is there a significant difference in retention rates of institutions that have Targeted Seminars and the retention rates of institutions that do not have Targeted Seminars?

RQ5: Is there a significant difference in retention rates of institutions that have Learning Communities and the retention rates of institutions that do not have Learning Communities?

RQ6: Is there a significant difference in retention rates of institutions that have Early Warning/ Early Alert Systems and the retention rates of institutions that do not have Early Warning/ Early Alert Systems?

RQ7: Is there a significant difference in retention rates of institutions that have Service Learning and the retention rates of institutions that do not have Service Learning?

RQ8: Is there a significant difference in retention rates of institutions that have Undergraduate Research and the retention rates of institutions that do not have Undergraduate Research?

RQ9: Is there a significant difference in retention rates of institutions that have Assessment of the First Year Program and the retention rates of institutions that do not have Assessment of the First Year Program?

SIGNIFICANCE OF THE STUDY

Performance funding mechanisms have been implemented to hold institutions more accountable and advance a focus on student outcomes thereby producing a more entrepreneurial spirit within higher education through increasing effectiveness and efficiency (Dougherty, Natow, Bork, Jones & Vega, 2013). By gaining insights into which first year programs are most effective, institutions may adjust existing programmatic efforts to positively influence student success and retention.

REVIEW OF THE LITERATURE

The examination of first year programs and components is a relatively young field of study in the higher education literature with the inaugural national survey on the first year seminar conducted in 1991 (Fidler & Fidler, 1991). Fidler (1989) was an early researcher at the forefront of the field of student retention and examined one aspect of the first year experience, called targeted seminars, enhanced learning and promoted student retention. Research indicated that participation in a freshman seminar course was linked to an increase in student retention to the sophomore year (Fidler, 1990). These findings were applicable to a school by school comparison and in a closer examination of a seminar course offered at a large, land-grant institution (Fidler & Shanley, 1993).

A little over a decade later, Bebergal (2003) examined demographic and academic factors at a mid-size, public, four-year institution in southeast Florida, including the type of orientation program the student attended, that might be used as predictors of first year retention . Little concrete data was determined to be linked to persistent students, yet two major factors were linked to those who left the institution: students were enrolled in a lower number of credit hours than persistors and departing students accumulated greater student loan debt than persistors.

Fulcomer (2003) examined a cohort of students at a small, private college to determine predictors that affect retention of first and second year students. Major findings of the study included the importance of utilizing student information such as number of schools the student applied to, whether the student would be playing varsity athletics, if the student would have a work study position, and the student's level of satisfaction with their experience at the school. .

The comparison of varying student attributes over a period of time has been beneficial for institutional administrators who wish to establish a model to predict student success. A longitudinal study conducted at a Northeast Tennessee community college established several factors the institution could use to predict the successful fall-to-fall semester retention of first time freshmen (French, 2007). The factors leading to retention were: semester grade point average; remedial course enrollment; credit hours completed; applying for admission more than 61 days in advance of the first day of classes. The factors leading to attrition, or the unsuccessful retention of students, were: receiving only Pell grants; applied science degree candidate; and GED completion.

O'Rear (2004) determined what influences academic achievement specific to the success of new students at 43 Baptist colleges in the United States. This unique study concentrated on the retention efforts of many institutions working to improve their rates, instead of looking at individual institutions. These landmark studies demonstrate a continued and concerted effort to understand the factors that lead to student persistence and retention in effort to predict, or determine earlier on, the factors that lead to student success.

Stuart (2010) stated that colleges are increasingly using early detection mechanisms to target students with academic weaknesses and limited financial means. These pre-college programs, also called bridge programs, are geared toward providing students with additional support and resources to undergird success and reduce risk factors.

Bridge Programs

Bridge programs grew out of the idea of strengthening the support and resources available for freshman. Ackermann (1990) touted the benefits of such a program for students of underrepresented populations and from low-income families. Summer Bridge Programs (SBPs) have been one retention effort aimed at positively influencing the academic preparation and skills of entering freshmen prior to the first day of classes. Usually residential in nature, SBPs may target new students based on various categories (race or ethnicity, socio-economic status, test scores, GPA, etc.). Students may participate in seminars and preparatory classes, complete learning support requirements, or work towards the completion of for credit courses. students will complete their first foray into college life in a unique, resource-rich environment of challenge and support designed to facilitate student success by for a positive start.

Strayhorn (2011) examined the impact of a SBP's on one cohort of students in four specific areas: academic self-efficacy, sense of belonging, academic skills, and social skills. Results indicated that the SBP had the most significant impact in the academic realm with cohort members achieving a GPA that averaged 30 percent higher than peers who did not participate in the program.

Pre-Term Orientation

Other aspects of the first year experience that influence a student's success include those activities that occur prior to enrollment and the first day of classes, namely orientation activities. Pre and post evaluations of first year students participating in orientation activities indicated that the students had impractical ideas about what their academic, personal, and social life would be like while at college (Krallman, 1997). In general, the orientation experience helped students better gauge and adjust to more reasonable expectations.

Academic advisors and their relationship with first year students play an important role in orientation programs and in student success (Swanson, 2006). Research at one small faith-based liberal arts college demonstrated that having extra time with a professional staff member trained on academic advising and learning about the student's strengths on a personal basis resulted in a higher rate of persistence amongst those students. A study of African American freshmen (Brown, 2008) examined participation in a minority orientation program on the social adjustment and retention rates of the students at the predominantly white university. Students participating in the program were compared with students who did not. Participants were found to be more socially adjusted and to have successfully completed more credit hours than their counterparts who were not participating in the program.

The most effective orientation programs are those aimed at increasing retention, based on both student and university needs and interests, delivered in an appropriate format, and able to target specific student populations. Lorenzetti (2002) suggested guidelines for creating an online orientation program for new online students. Recommendations included breaking the information into manageable sections, formatting content as if it is an online course to grow familiarity with the format, discussing the similarities and difference between classroom and online academics, promoting awareness of campus resources and access, and continually reviewing and assessing the program.

Targeted Seminars

The freshman seminar began taking on many different characteristics and was adapted to meet the individual needs of the host institution. Barefoot and Fidler (1991) found the most common seminar types to be those centered on the topic of transition issues or more of an orientation to university life model, or topical seminars based on one academic area of study, professional skill building, or study skills development.

Some universities require enrollment in a first year seminar while others simply suggest, recommend, or encourage enrollment. Some seminars are for credit, others are pass/fail, and others are entirely voluntary with no repercussions for not participating. Malik (2011) found that students participating in a voluntary first year seminar were more likely to be successfully integrated into the social fabric of the campus. Students' participation in such a program was greatly influenced by the fact the course was not for credit and was voluntary.

Smith (1992) found that students required to participate in either a required course or in academic tutoring self-re-

ported they found the requirement had a positive impact upon their aptitude for learning and upon course grades.

Tinto (1996) advocated for extending the freshman seminar beyond one course and linking a block of classes together creating cohorts of students or learning communities. Tinto argued this change would have little impact on faculty and could be accomplished with only minor changes in scheduling while the impact on the academic experience of first year students could be significant. Examination of these linked courses indicated that students in a freshman seminar tied to at least one course in an academic discipline were retained at a higher rate and had higher grades compared to students who did not participate in such linked courses (Dick, 1998).

Learning Communities

As the freshman seminar transitioned to a more holistic and encompassing approach to become a freshman program or first year experience, it is easy to understand why one of the first substantial efforts beyond the seminar course began in the area of housing and residence life. Likewise, the jump from residence life programming and outreach activities to more concerted residence hall efforts like the Living Learning Community (LLC) was not a major leap but more of a slight re-alignment. Kahrig (2005) evaluated the residential learning communities at Ohio University. The most significant outcomes of the study were significant, positive effects between peer mentoring and engagement, academic engagement outside the classroom, and the level of student satisfaction in connection to the retention of first year students.

Upcraft (1995) collected stories of challenges and successes related to the advising of first year students. The results indicated a greater awareness of student development theory and ideologies on transition. The role of technology was continuing to grow and was seen as untapped opportunity to enhance advising and student contact. The role of mentoring by faculty and in training and recognizing faculty for successes was explored, as was the idea of linking advising to other first year initiatives like the Living Learning Community, and programs targeting specific populations such as adult students.

Early Warning/Early Alert Systems

Successful intervention during the first year of college can have the biggest impact on student grades and retention (Pan, 2008). Along with improving classroom engagement, expanding tutoring services and other academic resources, and providing midterm grade reporting, the early alert systems are increasingly becoming a part of a plan to retain and graduate students (Powell, 2003).

Early alert systems can target specific predictors of success such as class attendance. A study conducted at Florida A&M (Hudson, 2005/2006) examined the effectiveness of intervention based on absenteeism. Slightly more than 48 percent of the students submitted to the early alert system reported for excessive absences during the first six weeks of the semester went on to pass the course. Another 15 percent of the students dropped the courses for which they had been reported for missing. Students were engaged by the process of being contacted and related they were not aware their attendance was being watched so carefully and were pleasantly surprised by the guidance they received.

Part of the success of early alert warning systems is that they can take a holistic approach to student success and connect faculty, academic counselors, residence life, student life, student health, the counseling center, and other university constituencies in a unified response targeted to a particular student's needs. This communication between offices helps to break down any silos on the campus and increase communication and the sharing of academic performance, absences, extracurricular activities, social or judicial concerns, and financial, personal, family, or health issues impacting the student and their academic performance. By looking at the big picture, the institution can work with the student to look at options and determine a plan to help the student through whatever issue(s) are impacting their life (Wasley, 2007).

Service Learning

After decades of what he saw as the crumbling fragility of higher education, Greenleaf (1977) developed a new concept of service and leadership. The idea is built on the notion that servant-leaders are first and foremost of service to others and put other people's needs before their own. The servant grows and develops knowledge and skills and inherently becomes a leader. A leader with a servant's heart, who puts the needs of others first and whose aim is to see those being served become better people also intent on serving others (Greenleaf, 1977).

A growing emphasis in higher education is linking a service learning component with the first year seminar but some research has shown the strength of each are not necessarily multiplied when the two are combined. Stevens (2007) compared students in the same first year seminar course who participated in service learning versus those who did not. What service learning and the first year seminar had individually yielded separately in terms of engagement, retention, academic achievement, and satisfaction was not demonstrated when the two were merged. No significant differences between the two student populations were reported.

Some institutions incorporate service learning components into their first year seminar, others simply promote opportunities for student involvement, and still others have developed first year student courses centered on the topic of and active participation in service learning. A service learning course tends to integrate the social and academic experience of the student, build self-confidence, and strengthen the student's sense of belonging or connection to the institution, a by-product of which is increased persistence (Hutchinson, 2010).

Undergraduate Research

An increase in student success and retention rates indicates that colleges and universities have worked hard to engage students in the learning process, increase the number of students participating in undergraduate research, and have broadened traditional first year experience programs to encompass an array of programmatic aspects (Spanier, 2009). Through participation in research opportunities during the first year, students are more likely to earn higher grades and be retained. The students are also more likely to confirm their choice of major (Marcus, 2010).

Students participating in undergraduate research have overwhelmingly indicated it was a positive experience from which they gained personal experience and professional understanding (Seymour, 2004). Various models for successful research have included partnering undergraduates with faculty members or graduate student mentors. One such program at the University of Kentucky pairs first and second year undergraduate students with graduate students. These partnerships have produced an increase in the amount of research, the number of resulting publications, and served to successfully facilitate a large number of undergraduates into the research field (Hutchinson, 2004).

Undergraduate research has also been used as a tool to target various at risk student populations. Conditionally admitted students at one university conducted research alongside a faculty mentor. The program was tied to a living and learning community so that participants lived and worked with peers involved in research projects as well. Students involved with the program had better academic records and improved socialization, as well as higher rates of retention. The program's success was predicated on the fact students were able to visualize themselves as scholars and researchers (Ward, 2008).

The role of mentoring seems to play a huge role in the success of undergraduate research programs. The mentoring relationship helps students confirm their interest in a chosen major or career path and can generate enthu-

siasm in their chosen path. Faculty can achieve these results through research projects alone, but similar results can be achieved by incorporating research initiatives into the classroom (Karuktis, 2007). Undergraduate research also serves to add both a real and perceived value to the student's educational experience. Colleges and universities can utilize research programs as a marketing and recruitment tool for both students and faculty members. Research programs raise the profile of the department or major and aid in retention (Randall, 2011).

Assessment

Establishing guidelines for assessing the first year experience is important (Gardner, J.N., 1986, 1990). Assessment should not only examine the seminar or other individual component, but should examine the role of the faculty member as both a facilitator and mentor (Gardner, J.N., 1981). The first year experience, especially the seminar, offers opportunities for increasing the effectiveness of instruction and of learning but must be evaluated and assessed so that best practices are shared and replicated (Gardner, J.N., 1980).

Tinto's (1993) theory of student withdrawal was used by the University of Northern Colorado to determine the effectiveness of the university's first year experience program. The study's focus was on how the aspects of Tinto's theory impacted student participation and persistence in the first year experience seminar course. The study looked at not just the seminar but if it was linked to other courses, related to any specific major, and what the size of the class was. Analysis indicated the program was effective in retaining students through to the spring semester but less effective in yielding an increase in retention numbers from fall to fall. The results also indicated that linking courses with a major or specific course of study strengthened retention. Recommendations were made to strengthen commitment through a higher level of student engagement with the institution, activities, and faculty and staff, as well as, extending the seminar into a freshmen year long program (Adams, 2008).

Methodology

A quantitative study was conducted to determine connections between program attributes with fall-to-fall retention rates of first year students at six liberal arts colleges in the Mountain South. A non-random sampling technique of purposive sampling was used to select the colleges included in this study. Non-random sampling is appropriate for educational studies that use colleges or programs as the unit of analysis.. The sampling frame used for the study was the college database of The National Center for Education Statistics (NCES, 2013). The following criteria

were used to generate the sample: (a) four-year, liberal arts colleges, (b) located within a 250 mile radius of both the National Resource Center for The First-Year Experience and Students in Transition located in Columbia, South Carolina, and the John N. Gardner Institute for Excellence in Undergraduate Education located in Brevard, North Carolina, (c) located within the southern Appalachian Mountains identified by the Appalachian Regional Commission as the South Central subregion encompassing northeast Tennessee, southwest Virginia, and western North Carolina (ARC, 2012), (d) with enrollment, retention, and demographic data from fall 2010 to fall 2011 listed on the database of The National Center for Education Statistics (NCES, 2013), and (e) with identified components of a first year program.

Using a geographic cluster sampling strategy, two institutions from each state within the Appalachian Regional Commission's classification of the South Central subregion and meeting the criterion were selected. Limitations for cluster sampling are naturally occurring variance in characteristics between samples such as political and cultural differences (Ray, 1983). Although the six colleges identified for this study are within three separate states, regionally the area shares many cultural and social similarities as denoted by the Appalachian Regional Commission in their classification of this area as the South Central subregion (ARC, 2012). The cluster sample area offers both a small-scale version of a larger population while maintaining regional similarities; being simultaneously and internally heterogeneous and externally homogeneous (Zelin & Stubbs, 2005). Advantages to cluster sampling are the ability to reduce confounding through isolation, an increased efficiency in generating the sample, and the ability to target naturally occurring clusters within the population (Teddlie & Yu, 2007). Two colleges each from Tennessee, North Carolina, and Virginia that met the criteria were selected: Emory and Henry College, Mars Hill College, Milligan College, Tusculum College, University of North Carolina Asheville, and the University of Virginia's College at Wise. Demographic data describing the make-up of the student body including age, gender, and race, as denoted in The National Center for Education Statistics' database were included in the study.

Instrumentation

The data for this study were housed in the database of The National Center for Education Statistics which is a center of the Institute of Education Services (IES, 2012), which is the research arm of the United Stated Department of Education (DOE, 2012), and collected via instrument from the six colleges. The longevity of the system undergirded validity as the collection of data by NCES is highly standardized. Utilizing NCES data aids in the reduction of bias as most instances occur during the collection of data (Good & Hardin, 2003).

Data Collection

In addition to the demographic and retention data collected from NCES, an instrument was developed by the researcher to identify the most common aspects of first year programs based on research and the literature review (See Appendix A). Upon collection the data were transmitted to the Statistical Package for Social Sciences (SPSS), version 15.0.

Data Analysis

The data were analyzed using appropriate statistical techniques for the hypotheses under consideration. The criterion variable was retention, which was defined as continued enrollment for first year students from entry in their first fall semester through to continued enrollment in the following academic year. A preliminary data analysis to ascertain descriptive statistics was conducted. In order to determine if there was an association between each variable and fall-to-fall retention, independent samples t tests were conducted.

RESULTS

The purpose of this study was to investigate if any associations existed between the absence or presence of nine components of first year programs and the retention rate of new students in an effort to provide information to those working with retention and persistence initiatives at institutions of higher education.

Institutional Demographic Overview

Demographics for each of the 6 college are listed alphabetically below and include private/public affiliation, accreditation, costs, and enrollment information:

Emory and Henry College

Emory and Henry College is a private, coeducational, liberal arts college, affiliated with the United Methodist Church and located in rural, Emory, Virginia. The college was founded in 1836 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). In 2011 there were 939 undergraduate students. Federal grants were received by 48% of the student body and federal student loans by 73% to be applied to the average cost of $18,613. In-state students comprise 56% of the student body and out-of-state students make up 44%. Women comprise 48% of the enrollment and men 52%. Full-time students encompass 96% and part time students 4% of the student body. Based on self-reports, the college's student body is made up of 9% Black or African American, 2% Hispanic/Latino, 82% White, 2% Multiracial, 5% unknown, and 2% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 73% (NCES, 2013).

Mars Hill College

Mars Hill College is a private, coeducational, liberal arts college located in a rural setting in Mars Hill, North Carolina. Although founded by those of the Baptist faith, the college has no religious affiliation, although it does partner with the Cooperative Baptist Fellowship of North Carolina and provides some scholarship through the Baptist State Convention of North Carolina. The college was founded in 1856 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). In 2011 there were 1,281 undergraduate students. Federal grants were received by 53% of the student body and federal student loans by 78% to be applied to the average cost of $18,807. In-state students comprise 63% of the student body, out-of-state students make up 34%, and international students 3%. Women comprise 50% of the enrollment and men 50%. Full-time students encompass 92% and part time students 8% of the student body. Based on self-reports, the college's student body is made up of 2% American Indian or Native Alaskan, 1% Asian, 17% Black or African American, 3% Hispanic/Latino, 71% White, 3% unknown, and 4% Non-resident alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 60% (NCES, 2013).

Milligan College

Milligan College is a private, coeducational, liberal arts college maintaining an active relationship with the Christian Churches/Churches of Christ and located in Milligan College, Tennessee. The college was founded in 1866 and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). In 2011 there are 984 undergraduate students. Federal grants were received by 34% of the student body and federal student loans by 60% to be applied to the average cost of $15,840. In-state students comprise 58% of the student body and out-of-state students make up 42%. Women comprise 60% of the enrollment and men 40%. Full-time students encompass 92% and part time students 8% of the student body. Based on self-reports, the college's student body is made up of 1% Asian, 5% Black or African American, 3% Hispanic/Latino, 85% White, 2% Multiracial, and 2% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 80% (NCES, 2013).

Tusculum College

Tusculum College is a private, coeducational, liberal arts college located in Greeneville, Tennessee. The college was founded in 1794 by Presbyterians, maintains a relationship with the Presbyterian Church, and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). There are 1,914 undergraduate students. Federal grants were received by 74% of the student body and federal student loans by 88% to be applied to the average cost of $15,689. In-state students comprise 64% of the student body, out-of-state students make up 34%, and international students 2%. Women comprise 58% of the enrollment and men 42%. Full-time students encompass 96% and part time students 4% of the student body. Based on self-reports, the college's student body is made up of 1% Asian, 13% Black or African American, 2% Hispanic/Latino, 81% White, 2% unknown, and 2% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 59% (NCES, 2013).

University of North Carolina at Asheville

The University of North Carolina at Asheville is a public, coeducational, liberal arts college located in an urban setting in Asheville, North Carolina. Founded in 1927 as the Buncombe County Junior College, it joined the University of North Carolina system in 1969. The college is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). There are 3,814 undergraduate students. Federal grants were received by 33% of the student body and federal student loans by 45% to be applied to the average cost of $9,131. In-state students comprise 84% of the student body, out-of-state students make up 16% and international students comprise 1%. Women comprise 56% of the enrollment and men 44%. Full-time students encompass 82% and part time students 18% of the student body. Based on students self-reports, the college's student body is made up of 1% Asian, 3% Black or African American, 4% Hispanic/Latino, 85% White, 2% multiracial, 3% unknown, and 1% Non-Resident Alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 80% (NCES, 2013).

TABLE 1
PROGRAM PRESENCE OR ABSENCE BY INSTITUTION

Program	Emory & Henry	Mars Hill	Milligan	Tusculum	UNC Asheville	UVa-Wise
Summer Bridge Program	Present	Absent	Absent	Present	Present	Absent
Pre Term Orientation	Present	Present	Present	Present	Present	Present
Outdoor Adventure Orientation	Absent	Absent	Absent	Absent	Present	Absent
Targeted Seminar	Absent	Present	Absent	Present	Present	Present
Learning Communities	Absent	Absent	Absent	Present	Absent	Absent
Early Warning/Early Alert	Present	Present	Present	Present	Present	Present
Service Learning	Present	Present	Present	Present	Present	Present
Under-graduate Research	Absent	Absent	Present	Present	Present	Present
Assessment	Absent	Present	Present	Present	Present	Present

University of Virginia's College at Wise

The University of Virginia's College at Wise is a public, coeducational, liberal arts college located in a rural setting. The college was founded in 1954 as Clinch Valley College of the University of Virginia and is regionally accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). There are 2, 067 undergraduate students. Federal grants were received by 51% of the student body and federal student loans by 56% to be applied to the average cost of $10,774. In-state students comprise 96% of the student body and out-of-state students make up 3%. Women comprise 56% of the enrollment and men 44%. Full-time students encompass 73% and part time students 27% of the student body. Based on students self-reports, the college's student body is made up of 1% Asian, 9% Black or African American, 2% Hispanic/Latino, 82% White, 4% unknown, and 1% Non-resident alien. The retention rate for first-time, full-time students from fall 2010 to fall 2011 was 62% (NCES, 2013). Results from the collection of data regarding institutional programs are provided in Table 1. Institutional enrollment information is reported in Table 3.

Programmatic Variables Analysis

Programmatic variables were researched in order to determine if the retention rates of students varied by institutions based on the absence or presence of 9 first year program initiatives. The demographic variables researched were Summer Bridge Programs, Pre-Term

Orientation, Outdoor Adventure Orientation, Academic/Transition Seminars, Learning

Communities, Early Warning/Academic Alert Systems, Service Learning, Undergraduate Research, and Assessment.

TABLE 2
INSTITUTIONAL ENROLLMENT AND RETENTION ANALYSIS

School	Enrolled Fall 2010	Retained Fall 2011	Retention Rate	Number of Programs Offered
Emory & Henry	248	180	73%	4
Mars Hill	273	164	60%	5
Milligan	176	141	80%	5
Tusculum	354	208	59%	8
UNC Asheville	593	473	80%	8
UVa-Wise	399	249	62%	6

TABLE 3
RETENTION RATE ANALYSIS COMPARING SUMMER BRIDGE PROGRAM PRESENCE AND ABSENCE

Summer Bridge Program	N	Mean Retention	Standard Deviation	Range
Present	3	70.67%	10.693	59% - 80%
Absent	3	67.33%	11.015	60% - 80%

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Summer Bridge Programs and those without such programs. The test was not significant, t(4) = -.376, p = .726. The 95%

confidence interval for the differences in the means was -27.941 to 21.275. The difference between means was -3.33. Therefore, the null hypothesis was retained. Table 3 indicates program frequency, associated percentages, standard deviation, and range.

Pre-Term Orientation was a constant and was present at all 6 institutions. The program frequency, associated percentages, standard deviation, and range are reported in Table 4.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Outdoor Adventure Orientation and those without such programs. The test was not significant, t(4) = -1.302, p=.263. The 95% confidence interval for the differences in the means was -41.356 to 14.956. The difference between means was -13.200. Therefore, the null hypothesis was retained. Table 5 indicates program frequency, associated percentages, standard deviation, and range.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Targeted Seminars and those without such programs. The test was not significant, t(4) = 1.454, p=.220. The 95% confidence interval for the differences in the means was -10.231 to 32.731. The difference between means was 11.250. Therefore, the null hypothesis was retained. Table 6 indicates program frequency, associated percentages, standard deviation, and range.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Learning Communities and those without such programs. The test was not significant, t(4) = 1.142, = .317. The 95% confidence interval for the differences in the means was -17.172 to 41.172. The difference between means was 12.00. Therefore, the null hypothesis was retained. Table 7 indicates program frequency, associated percentages, standard deviation, and range.

Early Warning/Early Alert Systems was a constant and was present at all 6 institutions with results reported in Table 8.

Service Leaning was a constant and was present at all 6 institutions. The program frequency, associated percentages, standard deviation, and range are reported in Table 9.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Undergraduate Research and those without such programs. The test was not significant, t(4) = -.400, p = .710. The 95% confidence

TABLE 4
PRE-TERM ORIENTATION PRESENCE

Pre-Term Orientation	N	Mean Retention	Standard Deviation	Range
Present	6	69%	9.879	59% - 0%

TABLE 5
RETENTION RATE ANALYSIS COMPARING OUTDOOR ADVENTURE ORIENTATION PRESENCE AND ABSENCE

Outdoor Adventure Orientation	N	Mean Retention	Standard Deviation	Range
Present	1	80%	-	-
Absent	5	66.80%	9.257	59%-80%

TABLE 6
RETENTION RATE ANALYSIS COMPARING TARGETED SEMINAR PRESENCE AND ABSENCE

Targeted Seminar	N	Mean Retention	Standard Deviation	Range
Present	4	65.25	9.912	59% - 80%
Absent	2	76.50	4.950	73% - 80%

TABLE 7
RETENTION RATE ANALYSIS COMPARING LEARNING COMMUNITIES PRESENCE AND ABSENCE

Learning Communities	N	Mean Retention	Standard Deviation	Range
Present	1	59%	-	-
Absent	5	71%	9.592	60%-80%

TABLE 8
EARLY WARNING/EARLY ALERT PRESENCE

Early Warning/ Alert	N	Mean Retention	Standard Deviation	Range
Present	6	69%	9.879	59%-80%

TABLE 9
SERVICE LEARNING PRESENCE

Service Learning	N	Mean Retention	Standard Deviation	Range
Present	6	69%	9.879	59%-80%

interval for the differences in the means was -29.793 to 22.293. The difference between means was -3.750. Therefore, the null hypothesis was retained. Table 10 indicates program frequency, associated percentages, standard deviation, and range.

An independent-samples t test was conducted to evaluate the null hypothesis that there is no significant relationship in the retention rates of institutions with Assessment of First Year Programs and those without such programs. The test was not significant, $t(4) = .405$, $p = .706$. The 95% confidence interval for the differences in the means was -28.126 to 37.726. The difference between means was 4.800. Therefore, the null hypothesis was retained. Table 11 indicates program frequency, associated percentages, standard deviation, and range.

DISCUSSION

The presence of Summer Bridge Programs at three institutions tends to support research (Stuart, 2010) that colleges are increasingly using earlier and earlier intervention programs. Summer Bridge Programs allow institutions to target at risk students in an attempt to impact their academic success as early as possible in hopes of a positive impact on retention. Ackermann (1990) found that participants in Summer Bridge Programs were retained at a higher rate and were more successful academically. Likewise, Strayhorn (2011) found Summer Bridge Programs had a significant impact on academic grade point average. Professional literature in this area has established a positive association between participating in a Summer Bridge Program and academic performance. Less clear is if Summer Bridge Programs are impactful on first year student retention.

All six institutions in the study indicated that Pre-Term Orientation was present as part of their first year program initiatives. The mean retention rate for the six schools was 69% with a range of 59% to 80%. The presence of the program at all six schools speaks to the presumptive importance of the program in assisting in the transition of students to college (Disbro, 1995) and facilitating their incorporation into the social fabric of the campus community (Robinson, 1996). The presence of Pre-Term Orientation at all six institutions is also indicative of the twenty five plus years in which higher education has had to respond programmatically to combat the issues addressed by the 1989 report from The Carnegie Foundation for the Advancement of Teaching and the American Council on Education (Boyer, 1990). A major impact of Pre-Term Orientation on new students stems from the influence it has on a student's feelings about their own personal campus experience (Hodum, 2007) and the student's ability to apply realistic expectations (Krall-

TABLE 10
RETENTION RATE ANALYSIS COMPARING UNDERGRADUATE RESEARCH PRESENCE AND ABSENCE

Undergraduate Research	N	Mean Retention	Standard Deviation	Range
Present	4	70.25%	11.325	59%-80%
Absent	2	66.5%	9.192	60%-73%

TABLE 11
RETENTION RATE ANALYSIS COMPARING ASSESSMENT PRESENCE AND ABSENCE

Assessment	N	Mean Retention	Standard Deviation	Range
Present	5	68.20%	10.826	59%-80%
Absent	1	73%	-	-

man, 1997). Pre-Term Orientation allows extra time for student and staff interaction and the development of personal relationships resulting in increased retention (Swanson, 2006) and the successful completion of more credit hours (Brown, 2008). No matter the format, online or on ground, or the length of the program, the ultimate aim of Pre-Term Orientation is to increase retention (Lorenzetti, 2002) through the formation of individual connections between student and college personnel. Scagnoli (2001) found that Pre-Term Orientation increased the sense of connection to the institution resulting in increased retention. Lehning (2008) found that orientation participants were retained at a higher rate and had higher grade point averages than non-participants. The literature to date is conclusive that orientation programs have a positive impact. The areas of impact, however, vary by institution and include increased grade point average, retention, and/or number of credit hours successfully complete. Given the variance in impacts, additional research is warranted in this area.

The retention rate for the one school with an Outdoor Adventure Orientation was 80% while the mean retention rate for the five schools without the program was 66.80% with a range of 59% to 80%. The institution with the program had a retention rate 13.2% higher than the retention average of those five schools without the program. An independent-samples t test indicated that there was no significant association between the retention of students at schools with or without the program. The presence of an Outdoor Adventure Orientation program at only one school coincides with 2012 figures which show only 185 such programs reported by schools in the United States (Outdoor, 2013). The low percentage of schools offering

Outdoor Adventure Orientation programs could be a result of the expenses related to special equipment, staff training, and the assumption of additional institutional risk and liability related to conducting such programs with small program size, an overnight component, and related travel (Bell, Holmes, Marion & Williams, 2010). The experiential, hands on learning that occurs in Outdoor Adventure Orientation programs helps participants develop a strong sense of connection to their peers and to the institution (Wolfe, 2011). The small cohort nature of the programs offers great flexibility in addressing the personal interests and needs of each student. The outdoor adventure component appeals to those with a natural affinity for the great outdoors but may not be an enticement to those with other interests. Brown (1998) found that students who elected to participate in an Outdoor Adventure Orientation were retained at a higher rate. The continued growth in the number of programs and participants indicates that institutions see value in Outdoor Adventure Orientation programs (Outdoor, 2013). The exact nature of the program's value is unclear and future research is necessary.

A review of the literature and the presence of Targeted Seminars at a majority of the schools indicated the prevalence of such programs nationwide. However, the two institutions without such a program averaged a retention rate 11.25% higher than those with the program indicated that program's presence in and of itself does not result in an automatic increase in the retention of students. Perhaps the inconsistencies in course content and topics that are covered influences the impact on the course has upon retention (Jessup-Anger, 2011; Hunter & Linder, 2005). Course content can vary greatly from institution to institution as well as between instructors within the same college (Harroun, 2005). Malik (2011) found that student success in targeted seminars was directly impacted by whether the course was for credit and required or was purely a voluntary elective. Required courses produced higher grades (Smith, 1992). Targeted Seminar courses linked to other courses and specifically tied to academic disciplines also increased student retention and yielded higher grades (Tinto, 1996). Institutional goals for hosting a Targeted Seminar course can vary greatly including developing connections and relationships between faculty, staff, and students, and undergirding academic success and persistence through skills building (Barefoot and Fidler, 1991). Given the range of variables associated with Targeted Seminars and the inconclusive nature of which variables have an association with retention, further research is necessary.

The one school with Learning Communities reported the lowest retention rate of all six institutions. An independent-samples t test indicated that there was no significant

association between the retention of students at schools with or without the program. Conversely, a review of the literature indicated that the presence of Learning Communities promoted academic and social excellence (Mahoney & Schamber, 2011). All six institutions are small, liberal arts colleges while the research to date has focused on larger universities where the niche of a Learning Community may be much more impactful on building community, peer connections, achievement, and retention (Kahrig, 2005). Strengthening faculty and student relationships and mentoring through Learning Communities is an effort to increase academic engagement in and out of the classroom and thereby retention (Upcraft, 1995). Engstrom (2008) noted a vicarious byproduct for some students participating in a community was a feeling of disruption due to the overwhelmingly, high degree of social interaction resulting in students not feeling the Learning Communities affected their retention. Pike (2011) found that students in a Learning Community had higher grades but cited the student's personal interest in the topic and election to participate in the program as a significant indicator of success. Learning communities are not limited to those linked with academic courses. They may be residential Living Learning Communities or themed to an issue or interest rather than an academic course. The number of institutions reporting no linked Learning Communities may be indicative that other types of communities are being explored or that limited resources or other factors have prohibited their formation. The research to date remains inconclusive and additional research is recommended on the topic and variations.

As indicated by its presence at all six schools, more and more institutions see Early Warning/Early Alert Systems as another tool in the college's retention plan (Powell, 2003). Early Warning/Early Alert Systems may target specific characteristics of concern such as class absences (Hudson, 2005/2006) or may take a more rounded, holistic approach by bringing together all aspects of a student's career, from faculty, academic advisor, club advisor, financial aid, student health, student life, and residence hall staff (Wasley, 2007). Because of the limited research in this area additional research is recommended.

The review of the literature indicates that direct and applied experiences such as those offered through Service Learning affords students the opportunity to put theory into practice and increase learning and skills development (Sheffield, 2005). Less clear is a direct linkage between Service Learning programs and increased retention. Peer mentoring is a direct form of Service Learning (Hamid, 2001) that may be incorporated into a first year program or seminar. While both Service Learning and a seminar may generate positive results aimed at student retention, combining such programs does not multiply the positive

effect and may in fact diminish both. Stevens (2007) examined this conflict and found those in a seminar course who participated in Service Learning and those who did not saw no significant differences in retention. The present study supports the no significant difference finding. Perhaps the positive sense of connection and community which Service Learning seems to produce does not translate into increased institutional retention but varies depending on where and how the Service Learning piece is incorporated be that in a first year seminar, as another course component, or in a stand-alone course all to itself. The findings are unclear and more research in this area is needed.

Schools with an Undergraduate Research program averaged a retention rate 3.75% higher than those without Undergraduate Research. An independent-samples t test indicated that there was no significant association between the retention of students at schools with or without the program. A review of the literature indicated that Undergraduate Research opportunities during the first year increased student success and retention (Spanier, 2009) as well as yielded higher grades and helped solidify the student's choice of major (Marcus, 2010). Residual benefits included being able to translate theory and in class learning to practical applications while gaining personal and professional insight into the field of study (Seymour, 2004). Likewise, the university may see residual benefits through increased enrollment and research and the resulting notoriety and raised profile through conferences presentations and journals (Hutchinson, 2004). The higher retention rate established by the study and the preponderance of the literature associated only positive benefits for Undergraduate Research, however further research is recommended to expand the body of available information.

Five of the liberal arts colleges reported the presence of Assessment with a mean retention rate of 68.20% and a range of 59% to 80%. One institution without the program had a retention rate of 73%. The one institution without Assessment therefore indicated a retention rate that was 4.8% higher than the average of those reporting they had the program. An independent-samples t test indicated that there was no significant association between the retention of students at schools with or without the program. Program assessment and continuous improvement is an important part of the institutional accreditation process (SACSCOC, 2013). Assessment provides accountability and documents learning outcomes (CAS, 2013). Instituting a protocol for assessing first year student program attributes is important (Gardner, J.N., 1986, 1990) so that results may be shared and successes replicated (Gardner, J.N., 1980). Assessment results are critical in the decision making process when deciding where to put human and fiscal resources. Assessment is an

essential component of first year programs and warrants additional research on programs and attributes.

Implications for Practice

The findings of this study can help guide the decision making process at the six liberal arts college concerning resource allocation, best practices, benchmarking, and first year program attributes all as they relate to retention. The implications of the study were that the most common programs are Pre-Term Orientation, Early Warning/Early Alert Systems, and Service Learning programs which were each in place at all six institutions and produced a range of retention rates from 59% to 80%. This finding should be reviewed in conjunction with research indicating that Pre-Term Orientation assists with student integration to the academic and social fabric of the campus (Robinson, 1996) and to develop more realistic expectations for their collegiate experience (Krallman, 1997). Research on Early Warning/Early Alert Systems indicated that early intervention can provide the most influential bearing on first year students' grades and retention (Pan, 2008). Likewise, Service Learning created a sense of community caring and support (Hamid, 2001) and social and academic integration (Hutchinson, 2010) yet may not yield a direct association with retention (Stevens, 2007). The findings indicate that colleges operate many different first year programs, each impacting the individual student in a different manner. All of the programs yield positive benefits which may influence student success but may not directly translate into student retention.

CONCLUSION

The focus of this study was six liberal arts colleges in the mountain south area including northeast Tennessee, southwest Virginia, and western North Carolina. The results should not be generalized to a broader population of higher education institutions. Others are encouraged to initiate similar studies aimed at a greater number of liberal arts colleges, at liberal arts colleges in another geographic area, or at other colleges and universities on a larger scale. Studies targeting a larger population of liberal arts colleges may assist in generalizing the results to all liberal arts institutions. No matter the type, scale, or target of the study, further research is merited to advance the study of first year program attributes and associated student retention.

Recommendations for additional research are listed below:

1. Research first year program attributes and the association between the total number of programs and retention rates.

2. Expand the current research model to determine how long each program attribute was present at each institution and the association to retention rates over time.

3. Research individual student participation and combination variations among first year program attributes and the association to retention rates.

4. Develop an expanded model for program attributes taking into account variations within each defined area.

REFERENCES

Ackermann, S.P. (1990). The benefits of summer bridge programs for underrepresented and low- income students. *College and University, 66* (4), 201-08.

Adam, C.L. (2008). *Effectiveness of the first-year experience program at the university of northern Colorado in supporting student transition and success: An application of Tinto's theory of college student withdrawal.* (Unpublished doctoral dissertation). University of Northern Colorado, Greeley.

Adams, C. (2012). Colleges offer incoming freshmen a summer 'bridge'. *Education Week, 31* (30), 8-8.

Appalachian Regional Commission. (2009). Retrieved from http://www.arc.gov/research/MapsofAppalachia.asp?MAP_ID=31.

Astin, A.W. (1991). *Assessment for excellence: The philosophy and practice of assessment and evaluation in higher education.* New York, NY: Macmillan.

Astin, A.W. (1993). *What matters in college: Four critical years revisited.* San Francisco, CA: Jossey-Bass.

Astin, A.W. (1994). *The American freshman: National norms for fall 1993.* Los Angeles: Higher Education Research Institute. University of California, Los Angeles.

Barefoot B.O., & Fidler, P.P. (1991). *National survey of freshman seminar programming, helping first year college students climb the academic ladder. the freshman year experience.* [Monograph No. 10]. University of South Carolina, National Resource Center for The Freshman Year Experience, Columbia.

Barefoot, B.O., Griffin, B.Q., & Koch, A.K. (2012). *Enhancing student success and retention throughout undergraduate education: A national survey.* Brevard, NC: John N. Gardner Institute for Excellence in Undergraduate Education. Retrieved from http://www.jngi.org/wordpress/wp- content/uploads/2012/04/JNGI-national_survey_web.pdf

Bell, B. J., Holmes, M. R., & Williams, B. G. (2010). A census of outdoor orientation programs at four-year colleges in the United States. *Journal of Experiential Education, 33* (1), 1-18.

Bebergal, J. (2003). *Predicting retention of first-year college students.* (Unpublished doctoral dissertation). Florida Atlantic University, Boca Raton.

Boyer, E. L. (1987). *College: The undergraduate experience in America.* New York, NY: Harper and Row.

Boyer, E.L. (1990). *Scholarship reconsidered: Priorities for the professoriate.* Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.

Boyer, E.L. (1997). *Scholarship reconsidered: Priorities of the professoriate.* San Francisco, CA: Jossey-Bass.

Brown, D.A. (1998). Does an outdoor orientation program really work?. *College and University, 73* (4), 17-23.

Brown P. (1981). Programs for first-year students. *Forum for Liberal Education, 4* (2), 17.

Bureau of Labor Statistics. (2010). Education and training outlook for occupations, 2010-2020. Washington, DC: Bureau of Labor Statistics. Retrieved July 5, 2013, from http://www.bls.gov/emp/ep_edtrain_outlook.pdf

Cabrera, A.E, Nora, A., & Castaneda, M.B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *Journal of Higher Education, 64* (2), 123-139.

Choy, S.P. (2001). *Students whose parents did not go to college: Postsecondary access, persistence, and attainment.* Washington, DC: Department of Education, National Center for Education Statistics.

Copeland, K, & Levesque-Bristol, C. (2010). The Retention Dilemma: Effectively Reaching the First-Year University Student. *Journal of College Student Retention: Research, Theory & Practice,* 12(4), 485-515.

Council of Public Liberal Arts Colleges. (n.d.). Retrieved from http://www.coplac.org/about/membership-information/membership-information.pdf.

Cross, P. K. (1982). Thirty years have passed: Trends in general education. In B.L. Johnson (Ed.), *General education in two-year colleges* (11-20). New Directions for Community Colleges, No. 40. San Francisco, CA: Jossey-Bass.

Cross, P. K. (1993). *Reaction to, "Enhancing the productivity of learning," by D. B. Johnson. AAHE Bulletin, 46*(4), p. 7.

Cuseo, J., Williams, M., & Wu, S. (1990). *Program assessment of the freshman seminar*. (Institutional research report). Marymount College, Rancho Palos Verdes, CA.

Cuseo, J. (1991). *The freshman orientation seminar: A research-based rationale for its value, delivery, and content.* [Monograph No. 4]. University of South Carolina, National Resource Center for The Freshman Year Experience, Columbia.

Derby, D.C., & Smith, T. (2004). An orientation course and community college retention. *Community College Journal of Research and Practice, 28*, 763-773.

Dick, R.C. (1998, November). *Fundamentals of communication and first year success seminar: Perspective from a faculty member of linked courses.* Paper presented at the National Communication Association Convention, New York, NY.

Disbro, W. (1995). *100 things every college freshman ought to know: an abridged college orientation catalog of definitions, customs, procedures, and plain old good advice about adjusting to the start of college.* Williamsville, NY: Cambridge Stratford Study Skills Institute.

Doughtery, K.J., Natow, R.S., Bork, R.H., Jones, S.M., & Vega, B.E. (2013). Accounting for Higher Education Accountability: Political Origins of State Performance Funding for Higher Education. Teachers College Record, 115, 1-50.

Engstrom, Z.B. (2008). *The impact of learning community involvement and campus climate on student satisfaction and the retention of Latino students at a highly selective private institution. (*Unpublished doctoral dissertation). University of Southern California, Los Angeles, CA.

Fidler, P.P., & Hunter, M.S. (1989). How seminars enhance student success. In M.L. Upcraft, J.N. Gardner, and Associates, *The Freshman Year Experience* (216-237). San Francisco: Jossey-Bass.

Fidler, P.P. (1990). Relationship of freshman orientation seminars to sophomore return rates. *Journal of The Freshman Year Experience, 3*(1), 7-38.

Fidler, P.P., & Fidler, D.S. (1991). *First national survey on freshman seminar programs: Findings, conclusions, and recommendations.* [Monograph Series No. 6]. University of South Carolina, National Resource Center for The Freshman Year Experience. Columbia.

Fidler, P.P., & Godwin, M. (1994). Retaining African-American students through the freshman seminar. *Journal of Developmental Education, 17*, 34-41.

Fidler, P.P., & Shanley, M.G. (1993, February). *Evaluation results of University 101.* Presentation made at the annual conference of The Freshman Year Experience, Columbia, SC.

Fowler, M., & Luna, G. (2009). High school and college partnerships: Credit-based transition programs. *American Secondary Education, 38*(1), 62-76.

French Graybeal, S.E. (2007). *A study of first-time freshmen's attributes and their associations with fall-to-fall retention rates at a two-year public community college.* (Unpublished doctoral dissertation). East Tennessee State University, Johnson City.

Fulcomer, E.W. (2003). *The influence of the first-year on first- to second-year retention at a small, private college.* (Unpublished doctoral dissertation).The University of Toledo, Toledo, OH.

Gardenhire, J.F. (1996). *Laney's success model for first year students.* Retrieved from http://eric.ed.gov.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York, NY: Basic.

Gardner, H. (1993). *Multiple intelligences: The theory in practice.* New York, NY: Basic.

Gardner, J.N. (1980). *University 101: A concept for improving teaching and learning.* Retrieved from http://eric.ed.gov.

Gardner, J.N. (1981). Developing faculty as facilitators and mentors. In V. A. Harren, M. N. Daniels, & J. N. Buck (Eds.), *Facilitating students' career development* (67-80). New Directions for Student Services, No. 14. San Francisco, CA: Jossey-Bass.

Gardner, J.N. (1986). The freshman year experience. *College and University, 61* (4), 261-274.

Gardner, J. N. (1990). *Guidelines for evaluating the freshman year experience.* The University of South Carolina, National Center for the Study of the Freshman Year Experience, Columbia.

Good, P.I., & J.W. Hardin. (2003). *Common Errors in Statistics (and How to Avoid Them).* Hoboken, NJ: John Wiley and Sons.

Greenleaf, R.K. (1977). *Servant leadership: A journey into the nature of legitimate power and greatness.* New York, NY: Paulist.

Halstead, J.A. (1997). What is undergraduate research?. *Journal of Chemical Education, 74*, 1390-1391.

Hamid, S.L. (2001). *Peer leadership: A primer on program essentials.* . [Monograph No. 32]. University of South Carolina, National Resource Center for The Freshman Year Experience, Columbia.

Harroun, D.G. (2005). *An assessment of the first-year experience seminar as a factor of student retention*, (An unpublished doctoral dissertation). Capella University, Minneapolis, MN.

Hodum, T.L. (2007). *An investigation of how students, faculty, and administrators within a particular liberal arts college perceived a new-student orientation program's effect on students' social integration and retention.* (An unpublished doctoral dissertation). University of Missouri, Columbia.

Hudson, W.E. (2005/2006). Can an early alert excessive absenteeism Warning system be effective in retaining freshman students?. *Journal of College Student Retention: Research, Theory & Practice, 7*(3/4), 217-226.

Hunter, M.S., & Linder, C.W. (2005). First-year seminars. In M.L. Upcraft et al (Eds.), Challenging and supporting the first-year student: A handbook for improving the first year of college (275-291). San Francisco, CA: Jossey-Bass.

Hutchinson, M.C. (2010). Service-learning and first-year seminars: A pedagogy for persistence. *Journal on Excellence in College Teaching, 21*(2), 67-96.

Hutchinson, S. (2004). Survey research. In DeMarrais, K. & Lapan, S. (Eds.*), Survey research in foundations for research: Methods for inquiry in education and the social sciences* (283). Mahwah, NJ: Lawrence Erlbaum.

Institute of Education Sciences, (n.d.). Retrieved from: http://ies.ed.gov/aboutus/

Ishitani, T.T. (2003). A longitudinal approach to assessing attrition behavior among first- generation students: time-varying effects of pre-college characteristics. *Research in Higher Education, 44* (4), 433-449.

Jacobs, J., & Archie, T. (2008). Investigating sense of community in first year college students. *Journal of Experiential Education, 30* (3), 282-285.

Jessup-Anger, J.E. (2011). What's the point? An exploration of students' motivation to learn in a first-year seminar. *The Journal of General Education, 60* (2), 101-116.

John N. Gardner Institute for Excellence in Undergraduate Education: Our History (n.d.). Retrieved from http://www.jngi.org/institute/our-history/.

Kahrig, T.(2005). *An evaluation of the residential learning communities program at Ohio University: An analysis of student involvement, satisfaction, academic success, and retention.* (Unpublished doctoral dissertation), Ohio University, Athens.

Kerry, K. (2007). The impact of undergraduate research on America's global competitiveness. *Journal of Chemical Education, 84* (6). 912-915.

Krallman, D., & Holcomb, T. (1997). *First-year student expectations: Pre- and post-orientation.* (Report No. ED411731). Paper presented at the Annual Meeting of the Association of Institutional Research, Buena Vista, FL.

Lehning, E.M. (2008). *Impact of an extended orientation program on academic performance and retention.* (Unpublished doctoral dissertation). Kansas State University, Manhatten.

Lorenzetti, J.P. (2002). Well begun is half done: Is orientation a key to retention?. *Distance Education Report, 6* (22), 1-6.

Lorenzetti, J.P. (2009). Early alert system flags students in trouble. *Distance Education Report, 13*, 5-7.

Madgett, P.J. & Belanger, C.H. (2008). First University Experience and Student Retention

Factors. *Canadian Journal of Higher Education*, 38(3), 77-96.

Mahoney, S., & Schamber, J. (2011). Integrative and deep learning through a learning community: A process view of self. *The Journal of General Education, 60* (4), 234-247.

Malik T. (2011). *College success: First year seminar's effectiveness on freshmen academic and social integration, impact on academic achievement and retention at a southern institution.* Retrieved from http://eric.ed.gov.

Marcus, J.M., Hughes, T.M., McElroy, D.M., & Wyatt, R.E. (2010). Engaging first-year undergraduates in hands-on research experiences: The upper green river barcode of life project. *Journal of College Science Teaching, 39* (3). 39-45.

Mbuva, J.M. (2011). An examination of student retention and student success in high school, college, and university. *Journal of Higher Education Theory & Practice, 11* (4). 92- 101.

McPherson J.L. (2007). *The effects of retention strategies on student attrition at a private, four- year, religiously affiliated liberal arts university.* (Unpublished doctoral dissertation). University of California, Santa Barbara.

Nathan, R. (2005). My freshman year: What a professor learned by becoming a student. Cornell, NY: Cornell University.

Nava, M.E. (2010). *Exploring new paths: The first-year experiences for first-generation college students and the impact of participating in comprehensive programs.* (Unpublished doctoral dissertation). University of Texas, Austin.

The National Center for Education Statistics (NCES). (2013). Retrieved from: http://nces.ed.gov/.

O'Rear, R.G. (2004). *A study of the relationship of institution-wide factors at Baptist colleges and universities to develop a predictive model for first-year freshmen retention.* (Unpublished doctoral dissertation). Baylor University, Waco, TX.

Our History (n.d.). National Resource Center for the First-Year Experience and Students in Transition at the University of South Carolina. Retrieved from http://www.sc.edu/fye/center/history.html.

Pan, W., Guo, S., Alikonis, C., & Bai, H. (2008). Do intervention programs assist students to succeed in college? A multilevel longitudinal study. *College Student Journal, 42* (1). 90-98

Pascarella, E.T., & Terenzini, P.T. (1983). Predicting voluntary freshman year retention/withdrawal behavior in a residential university: A path analytic validation of Tinto's model. *Journal of Educational Psychology, 75* (2), 215-226.

Pike, G.R., Hansen, M.J., & Lin, C. (2011). Using instrumental variables to account for selection effects in research on first-year programs. *Research in Higher Education, 52* (2), 194-214.

Powell, T. (2003). Alabama state takes new approach to curb low-retention rates. *Black Issues in Higher Education, 20* (18). 34.

Purdie, J.R., (2007). *Examining the academic performance and retention of first-year students in living-learning communities, freshmen interest groups and first year experience courses.* (Unpublished doctoral dissertation). University of Missouri, Columbia.

Putre, L. (2008). Online orientation boosts retention while addressing honor code. Distance *Education Report, 1* (23), 3-7.

Randall, G. K., & Collins, N. (2011). The value of undergraduate research for recruitment. *Council on Undergraduate Research Quarterly, 32* (2), 46-47.

Ray, J.J. (1983). A comparison between cluster and "random" sampling. *Journal of Social Psychology, 121*, 155-156.

Robinson, D.A.G., Burns, C.F., & Gaw, K.F. (1996). Orientation programs: a foundation for student learning and success. *New Directions for Student Services, 75*, 55-68.

Scagnoli, N.I. (2001). Student orientations for online programs. *Journal of Research on Technology in Education, 34* (1), 19-27.

Seymour, E., Hunter, A.B., & Laursen, S.L. (2004). Establishing the benefits of research experiences for undergraduates in the sciences: First findings from a three-year study. *Science Education, 88* (4), 493-534.

Sheffield, E.C. (2005). Service in service-learning education: The need for philosophical understanding. *High School Journal, 89* (1), 46-53.

Smith, J.B. (1992). Support programs and student self-efficacy: Do first-year students know when they need help? *Journal of the Freshman Year Experience. 4*(2), 41-67.

Smith, M.K. (2002). *Malcolm Knowles, informal adult education, self-directions and andragogy.* The Encyclopedia of Informal Education. Retrieved from www.infed.org/thinkers/et- knowl.htm.

Spanier, G.B. (2009). Connecting with today's students. *Presidency, 12* (3), 24-27.

Stevens, M.C. (2007). Impact of service learning on students in a first-year seminar, (Unpublished doctoral dissertation), University of Cincinnati, Cincinnati, OH.

Strayhorn, T.L. (2011). Bridging the pipeline: increasing underrepresented students' preparation for college through a summer bridge program. *American Behavioral Scientist, 55* (2), 142-159.

Stuart, R. (2010). Early detection. *Diverse Issues in Higher Education, 27* (18), 22-24.

Swanson, J.E. (2006). *Success in the first year: Impact of alternative advising on students at a liberal arts college.* (Unpublished doctoral dissertation). Western Michigan University, Kalamazoo.

Taylor, S.R. (1997). Servant-leadership. *Catalyst for Change, 26*, 5-7.

Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research, 1(1),* 77-100..

Tennessee Higher Education Commission. (2011). The Public Agenda for Tennessee Higher Education 2010-2015. Retrieved from http://www.tn.gov/thec/complete_college_tn/ccta_files/master_plan/The%20Public%20Agenda%20with%20Appendices%20Jan2011.PDF.

Tinto,V. (1987). *Leaving College.* Chicago, IL: University of Chicago Press.

Tinto, V. (1993). *Leaving College: Rethinking the causes and cures of student attrition.* (2nd ed.). Chicago, IL: University of Chicago Press.

Tinto, V. (1996). Reconstructing the first year of college. *Planning for Higher Education, 25* (1), 1-6.

Tinto, V. (2002, April 15). *Taking student retention seriously: Rethinking the first year of college.* A speech presented at the annual meeting of the American Association of Collegiate Registrars and Admissions Officers: Minneapolis, MN.

Upcraft, M.L., & Gardner, J.N. (1989). *The freshman year experience.* San Francisco, CA: Jossey-Bass.

Upcraft M.L., & Kramer G.L. (1995), *First-year academic advising: Patterns in the present, pathways to the future,* [Monograph No. 18]. University of South Carolina, National Resource Center for The Freshman Year Experience, Columbia, SC.

Vella, J. (1994) *Learning to listen, learning to teach.* San Francisco, CA: Jossey-Bass.

Ward, R., & Dixson, L. (2008). The first-year research experience: Miami University's scholastic enhancement program - undergraduate research option. *Council on Undergraduate Research Quarterly, 29* (1), 36-40.

Wasley, P., (2007). A secret support network. *Chronicle of Higher Education, 53* (23). A27- A29.

Weisgerber, J.E., (2005). *The impact of university 101 on freshman to sophomore retention rates at Urbana University.* (An unpublished doctoral dissertation). Capella University, Minneapolis, MN.

Wolfe, B.D., & Kay, G. (2011). Perceived impact of an outdoor orientation program for first- year university students. *Journal of Experiential Education, 34* (1), 19-34.

Zelin, A., & Stubbs, R. (2005). Cluster Sampling: A False Economy?. *International Journal of Market Research, 47*(5), 503-524.

Zeller, W. (1991). *Residence life programs and the first-year experience. the freshman year experience,* [Monograph No. 5]. University of South Carolina, National Resource Center for The Freshman Year Experience, Columbia, SC.

Zlotkowski, E., (2002). Service-learning and the first-year experience: Preparing students for personal success and civic responsibility. The First-Year Experience Monograph Series 34, (178).

2010-2011		APPENDIX A INSTITUTIONAL REPORTING INSTRUMENT
Present	**Absent**	**Programs Defined**
		Summer Bridge Programs Programs providing an important head start to college by offering an opportunity for new students to become comfortable within the new environment through intensive academic instruction typically lasting four to five weeks and usually encompassing remediation as needed, low cost, a residential option, and peer mentoring resulting in increased confidence and performance (Adams, 2011).
		Pre-Term Orientation A program geared at helping new students, and sometimes their parents and family members, adjust to college life through interaction with faculty, staff, and students during programming, activities, tours, and advising (Disbro,1995).
		Outdoor Adventure Orientation A type of college orientation program that brings together small groups, typically 15 or less, first-year students and uses adventure experiences happening out of doors in a wilderness setting with at least one overnight component (Bell, Holmes, Marion & Williams, 2010).
		Academic/Transition Seminars An academic course that aims to enhance the academic and social integration of first-year students by bringing together a variety of new student specific topics, essential skills for college success, and selected processes (Jessup-Anger, 2011; Hunter & Linder, 2005).
		Learning Communities Learning communities integrate course content/curriculum by linking one or more academic courses with a student cohort in order to promote learning and foster personal development in a supportive environment enhanced by peer interaction (Mahoney & Schamber, 2011).
		Early Warning/Academic Alert Systems A flagging system to alert a student and the faculty/academic advisor(s) on scholastic performance or classroom issues, early enough in the timeframe of the class so that appropriate referrals can be made to intervene and assist the student as needed (Lorenzetti, 2009).
		Service Learning A service-learning opportunity allows students to apply classroom skills and learning to a community problem in a hands on manner resulting in increased knowledge, deeper understanding, and skill refinement through the solving of the problem and through interaction with a diverse group of stakeholders (Sheffield, 2005).
		Undergraduate Research Defined as an investigation by an undergraduate that makes an original intellectual or creative contribution to a discipline. Regardless of the nature of individual undergraduate research programs, such research gives students an insight into the scientific enterprise that is unrivaled by any other part of the curriculum. It is important that undergraduate research is fun and engaging and that it endows students with commitment and proprietorship of their own projects (Halstead, 1997, pg. 1390)."
		Assessment (of new student/first year programs) "Programs and services must have a clearly articulated assessment plan to document achievement of stated goals and learning outcomes, demonstrate accountability, provide evidence of improvement, and describe resulting changes in programs and services (CAS, 2013)."

College Student Textbook Acquisition
An Exploratory Study

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ABSTRACT

The past ten years have seen an increase in the number of ways students can acquire textbooks. The traditional purchase of printed textbooks from the campus bookstore still exists, but now students can purchase e-books, buy online, or rent from either the campus bookstore or from an online provider. This research is an exploratory study of college student textbook acquisition. In this paper, we review the literature regarding the textbook acquisition process. We developed and administered a survey instrument to examine students' textbook acquisition patterns. We find that most students acquire their textbooks using more than one source. Eighty six percent of the students surveyed use more than one source for textbooks. Of those students who rely on only one source, half use the campus bookstore. A majority of students use both the campus bookstore and an online retailer. We also observe that the student's year in school is somehow related to their acquisition method.

INTRODUCTION

The rapid changes in technology have significantly affected college students and the entire college education framework over the past 20 years. One way technology has affected college students is in the acquisition and use of textbooks. Textbooks play an important role in college students' education. They are often necessary for satisfactorily passing a course: many instructors expect students to read the textbook to supplement in-class learning, or to work exercises in the book.

Textbook costs represent a significant portion of a college student's college expenses. The average price for a new textbook has increased from $56 in 2006/07 to $68 in 2012/13) (NACS, 2013). Students spend an average of $1200 per year on books (Senack, 2014), representing a significant portion of a student's budget. The size of the college textbook market has also grown. The number of students in college has increased in the past ten years and the cost of textbooks has also risen in that time. That has resulted in overall sales of college textbooks growing from $8.6 billion in 2003 to $10.45 billion in 2012 (NACS, 2013). Technology has brought about other changes in the college textbook market.

The growth of the Internet resulted in the availability of online textbook purchasing in the late 1990s. Responding to public pressure to reign in cost of textbooks, publishers introduced digital textbooks (e-books) in the mid-2000s. Although e-books have not had much impact on the textbook market, other changes have disrupted the textbook market (Martin, 2013). Recently, the most significant change in the market occurred in the latter 2000s when textbook rental became available. The following section discusses the changes that have occuurred in the textbook acquisition process.

Textbook Acquisition

Before the advent of the Internet, students obtained textbooks the old-fashioned way: purchase them from the campus bookstore. They could choose to purchase new or used books. Students at larger universities may have had other bookstores near campus from which to choose, so they have had a second type of choice to make. The acquisition process meant going to the bookstore, searching the shelves, selecting their books, and then standing in line to make their purchases. Although students still have that option today, students can also go online to obtain their books.

Online Purchasing

Online book buying became available in the late 1990s. Kranberg (1999) noted that students could find out the price, shipping charges, and delivery time by spending a few minutes online, and noted that college students were already the group that spent the most time online. Early researchers tried to understand why students bought textbooks online. Talaga and Tucci (2001) found that five attributes were important to students in purchasing textbooks online: price, buyback policy, return policy, ease of returns, shipping cost, and availability of the book at the local campus bookstore. Foucalt and Scheufele (2002) looked at factors related to motivation theories as predictors of online textbook purchasing and found that previous purchase online, knowledge of online retailers, and perceptions that needs would be met were all significant predictors. Yang, Lo, and Lester (2003) found that possession of computer/Internet skills, having a retentive attitude towards money, and dissatisfaction with the university bookstore were all predictors of purchasing textbooks online. Zhang and Prybutok (2005) found that possession of computer/Internet skills is associated with satisfaction in online purchasing. The prevailing belief today is that Internet purchases have become so common that no special skills are needed for online purchasing. While the availability of online purchasing was still a relatively new phenomenon, the textbook market changed again. The early 2000s saw the introduction of e-books as an alternative method to acquire textbooks.

The Promise of E-books

The rapid changes in technology over the past two decades, including the Internet and digital media, led many people to predict that e-books would replace printed books. The Wall Street Journal (Kang, 2004) touted the availability of digital books as a way to drive down the cost of textbooks. In recent years, e-book growth has exceeded growth of print books in the consumer market (Greenfield, 2013). However, sales in 2013 marked an end to that trend, with the growth in sales of hard-cover books outpacing growth in sales of e-books (Greenfield, 2013). E-book sales represented about one quarter of all consumer book sales in 2012 (Martin, 2013). Sales of college textbooks in digital formats have not grown at the same pace as sales of other digital books. Dimaria (2012) cites a recent study that found e-books only represent 10 percent of the college textbook market. Martin (2013) cites a study by the firm Student Monitor that said only 2% of students surveyed acquired all their books in digital form. Chulkov and VanAlstine (2013) found no difference in performance between students using e-books versus those using printed textbooks for their economics courses. Prior research suggests that students have a strong preference for printed books since current digital books offer limited highlighting and note-taking (McGowan, Stephens, and West, 2009).

Textbook Rental

The late 2000s saw the introduction of textbook rentals as a way for students to acquire their needed textbooks. Chegg is considered one of the pioneers of textbook rentals, having started in 2005 under the name of Textbookflix.com (Rosen, 2013). The Wall Street Journal suggested students might save 40 to 70 percent on textbook costs by renting, but cautioned students to pay attention to due dates and maintaining the condition of the book (Marte, 2009). Other online textbook providers have emerged, and many campus bookstores now also offer book rentals. Returning rental books also solves the problem of buybacks. Rental options may provide a convenience that is not found through other textbook acquisition options. The rental model may be undergoing further changes: the three rental leaders, Chegg, CampusBookRentals, and Rafter are looking at ways to enhance the services that come with textbook acquisition (Rosen, 2013). Publishers are looking at providing free digital access to renters until their printed copy arrives, and to transform the company into a connected learning platform (Rosen, 2013).

Research Questions

The changes in textbook acquisition options for college students led us to question what acquisition practices are being used by current students. Now that students have a choice, do they prefer a particular acquisition method? Do they employ more than one method? Do they use more than one source (bookstore/on-line) for their books? Do such demographic factors such as age, gender and year in school play a role in such choices?

Before designing a study that answers the question of why students choose particular acquisition methods, we wanted some insights into what methods of textbook acquisition they are using. Therefore, as an exploratory study, we use simple descriptive methods to parse the data in order to discover further lines of inquiry for the future. This paper represents the results of such an exploratory study. This paper also provides suggestions for areas of inquiry that should lead to important findings for publishers, retailers, and faculty.

RESEARCH METHODOLOGY

Since the purpose of this study was to gain insights into how students choose to acquire textbooks, our survey frame was focused on individuals enrolled in college. We conducted our research at a private university in the Midwestern U. S. We administered the questionnaire to students in ten management classes representing four different courses. Students were instructed to fill out the questionnaire based on their textbook acquisition within the most recent two semesters. We also collected information on gender, year in school (freshman, sophomore, junior, senior, graduate), and age. We received 285 responses, of which 278 were usable.

Results of the Study

There are currently four possible methods for students to acquire their textbooks: (1) buy at their local bookstore; (2) rent from their local bookstore; (3) purchase from on-line retailers; or (4) rent from on-line retailers. Students can choose to rent or buy, and students can choose the source of retailer: bookstore or on-line.

Acquisition Methods and Sources

About 16% of the students surveyed only used one of these four options to acquire their textbooks over the most recent two semesters. The rest of the students in the survey used at least two different options for the acquisition of their books. Table 1 illustrates that most students used two different options.

TABLE 1
NO. OF ACQUISITION METHODS USED BY STUDENTS OVER THE MOST RECENT TWO SEMESTERS

Acquired using a single method	44	15.8%
Acquired using 2 methods	173	62.2%
Acquired using 3 methods	51	18.3%
Acquired using all four methods	10	3.6%
Total	278	

Most students are using more than a single method for acquiring their textbooks. Those that did may not have had a choice. It could be that textbooks are not available under all four methods. Talaga and Tucci (2001) found that availability of textbooks at the bookstore affected whether students purchased books online. One advantage local bookstores have over other sources, is that they gather the required textbook information from the faculty. The local bookstore is most likely to always have the textbook the student needs for class. Custom books might only be available at the bookstore. If one considers service convenience, perhaps the local bookstore can provide experiences in ways the on-line retailer cannot. When it comes to service convenience, the on-line retailer may also provide conveniences that the bookstore cannot. For example, on-line options are generally available 24/7. A brief foray into the literature on service convenience reveals that there are five dimensions of service convenience: Decision, Access, Benefit, Transaction and Post Benefit (Berry, Seiders, and Grewal, 2002). One could speculate that there advantages to both local bookstores and on-line retailers in terms of these dimensions.

We further analyzed the students who only used one method to acquire their books. We found that 50% of these students only purchased from the local bookstore and 50% only used on-line sources. We compared this to students who use exactly two methods for acquisition: 22.5% of these students exclusively used the local bookstore (rent and buy) and 34.1% exclusively used on-line retailers (rent and buy). There are some students who have a scholarship or other funding that requires that they acquire their textbooks a certain way, for example, at the bookstore. See tables 2 & 3.

TABLE 2
STUDENTS WHO ONLY USED ONE METHOD TO ACQUIRE TEXTBOOKS

Only Purchased at Book Store	22	50.0%
Only Rented at Book Store	0	0.0%
Only Purchased on Line	17	38.6%
Only Rented on Line	5	11.4%
Total	44	

TABLE 3
STUDENTS WHO USED TWO METHODS TO ACQUIRE TEXTBOOKS

Rented & Bought from Bookstore	39	22.5%
Rented & Bought On-Line	59	34.1%
Bought On-line & from Bookstore	49	28.3%
Rent On-Line & Bought Bookstore	12	6.9%
Rented On-Line & from Bookstore	8	4.6%
Rent Bookstore & Bought On-Line	6	3.5%
Total	173	

A majority of students exclusively used only one source for acquiring books (bookstore or on-line retailers): 142 out of 278 or 51%. Analyzing students who used a single source we found that 61 exclusively used the bookstore and 81 exclusively used on-line resources. See Table 4.

TABLE 4
STUDENTS WHO EITHER EXCLUSIVELY USE THE LOCAL BOOKSTORE OR ON-LINE SOURCES

	#	% of Exclusive	% of All
Exclusively from Bookstore	61	43.0%	21.9%
Exclusively On-Line	81	57.0%	29.1%
Total	142		51.1%
All Survey Respondents	278		

Clearly, on-line competition has established an edge in the market (at least at this one university) and one wonders if the gap will continue to widen. Some online renters are beginning to introduce additional services (Martin, 2013). Will bookstores be able to provide convenience services that allow them maintain or increase market share?

Gender Differences

At early stages of Internet growth, men were earlier adopters than women. Today many Internet users, regardless of gender, make purchases over the Internet. We analyzed whether there are any acquisition differences between men and women. The number of men and women who use a single source versus multiple sources almost exactly mirrors the entire sample. See Table 5.

TABLE 5
GENDER BREAKOUT OF TEXTBOOK ACQUISITION

	Male		Female	
Single Source	25	15.2%	19	16.8%
Multiple Sources	140	84.8%	94	83.2%
Total	165		113	

The results did not merit any further analysis of gender differences based on on-line versus local bookstore acquisition.

Analysis by Year in School

We speculated that a student's current status (year in school) would have an impact on acquisition choice. We thought that freshmen, who are new to the process, might prefer the local bookstore. We also posited that Juniors or Seniors who are taking their upper level classes might be more inclined to purchase their textbooks to keep as references. We analyzed the number of methods used (single versus multiple) by year in school. Surprisingly, freshmen were the least likely to use a single method and the gradu-

ate students the most likely to use a single method. The number of graduate students in our study was low, so we cannot generalize our discussion. However, the high percentage of graduate students who used a single method for acquisition merits further investigation. We conjecture that freshmen were most likely to use multiple methods is because they are the most likely to have grown up in a world where e-commerce is common place and ubiquitous. See Table 6.

TABLE 6
NUMBER OF METHODS OF ACQUISITION BY YEAR IN SCHOOL

	Freshman	Sophomore	Junior	Senior	Graduate	Totals
Single Method	1	8	21	7	7	44
	2.0%	17.0%	18.4%	12.3%	63.6%	15.8%
Multiple Methods	48	39	93	50	4	234
	98.0%	83.0%	81.6%	87.7%	36.4%	84.2%
	49	47	114	57	11	278

We further analyzed the group of students who only used a single source (bookstore/on-line) for acquiring their textbooks. See Table 7. Sophomores and Juniors are slightly above average and Seniors are slightly below in the number of methods of acquisition they used. The percentage of graduate students who acquired books exclusively from the bookstore was higher than for any other group. One possible explanation is that graduate students are less price-sensitive, so they choose the convenience of the bookstore. Another possible explanation is that graduate students are not as comfortable buying books on-line, perhaps due to lower computer self-efficacy.

TABLE 7
STUDENTS WHO PURCHASE EXCLUSIVELY BY YEAR IN SCHOOL

	Freshman	Sophomore	Junior	Senior	Graduate	All
Exclusively from Bookstore	8	7	26	14	6	61
	53.3%	29.2%	40.0%	48.3%	66.7%	43.0%
Exclusively On-Line	7	17	39	15	3	81
	46.7%	70.8%	60.0%	51.7%	33.3%	57.0%
Total	49	47	114	57	11	278
% of Total	30.6%	51.1%	57.0%	50.9%	81.8%	51.1%

Rent versus Buy

We analyzed whether students prefer to rent books or buy books. We found that just under half (46%) of the students reported renting on-line and just under one third (32.7%) of the students reported renting from the bookstore. Most students reported they have purchased on-line (67.6%) or from the bookstore (63.7%). The percentages do not add up to 100 percent because most students use more than one method to acquire books. See Table 8.

TABLE 8
PERCENTAGE OF STUDENTS WHO REPORTED ACQUISITION FROM EACH SOURCE

	On-Line	In Store
Buyers	188	177
% of Students	67.6%	63.7%
Renters	128	90
% of Students	46.0%	32.4%

We don't know if these figures reflect true preference to purchase or if they simply reflect the fact that availability of rentals has not reached full market penetration. Students may want to rent in some cases and rentals are not available. Students may prefer to purchase books when they plan to keep them for future reference (Stone, Baker-Eveleth, 2013). Some students need a textbook for a course in their major and they want to keep the textbook when they are done with the class. These students usually want a new textbook (Stone, Baker-Eveleth, 2013).

Future Research

This research study was an exploratory look at college student acquisition of textbooks. Although the results were descriptive, the study results raise questions that suggest lines of inquiry which need further research. The table below (Table 9), we have identified various research questions that we think would be of interest to other researchers, faculty in general, and stakeholders in the college textbook market.

CONCLUSIONS AND IMPLICATIONS

This research examined the textbook acquisition of students at a medium-sized private university in the Midwest. Students can choose to rent or buy, and students can choose the source of retailer: bookstore or on-line. There are currently four possible methods for students to acquire their textbooks: (1) buy at their local bookstore; (2) rent from their local bookstore; (3) purchase from on-line retailers; or (4) rent from on-line retailers. Many students still choose to use the campus bookstore. By

TABLE 9
POTENTIAL RESEARCH QUESTIONS RELATED TO TEXTBOOK ACQUISITION

1. What factors impact choice of acquisition method?

2. What role does Service Convenience play in the textbook acquisition process

3. Are there trends in the textbook acquisition process over time?

4. How important is Service Quality in the textbook acquisition process?

5. Can complementary services influence students' preferred acquisition methods?

6. Are there factors faculty should consider when choosing textbooks for their classes?

7. How do supplementary materials affect textbook acquisition choices?

8. Is the textbook acquisition method associated with a student's attitude toward a class?

9. What factors influence students to buy and keep textbooks?

10. "Buyer (renter) remorse" – do students ever regret their acquisition choices and why?

11. What factors would lead students to acquire more electronic textbooks?

12. What role do publishers play in textbook acquisition?

having a physical presence at a college, bookstores have a potential competitive advantage. Most students use two acquisition methods, and some students use more methods. Although bookstores are sometimes the sole source of books for students, bookstores need to find ways to make themselves the preferred choice. Based on our study, improving the rentals of books from the bookstore might be one area bookstores can improve performance. The college textbook market is evolving. Students are taking advantage of the increasing number of alternatives in how they acquire textbooks. Retailers need to continuously adjust their strategies and services to maintain market share. As for faculty, we should probably be more aware of these options and take them into consideration when choosing a textbook for a course.

REFERENCES

Berry, L. L., Seiders, K. and Grewal, D. (2002). Understanding service convenience. *Journal of Marketing,* 66(July), 1-17.

Chulkov, D. V. and VanAlstine, J. (2013). College Student Choice Among Electronic and Printed Textbook Options. *Journal of Education for Business*, 88: 216-222.

Colwell, S. R., Aung, M., Kanetkar, V., and Holden, A. L. (2008). Toward a measure of service convenience: multiple-item scale development and empirical test. *Journal of Services Marketing*, 22(2), 160-169.

Dimaria, F. (2012) New Textbook Publishing Model for the Internet Age. *Education Digest: Essential Readings Condensed for Quick Review*, 77(5) (January), 50-54.

Foucalt, B. E., and Scheufele, D. A. (2002) Web vs. campus bookstore? Why students buy textbooks online. *The Journal of Consumer Marketing*, 19:4/5 409-423.

Greenfield, J. (2013). Hardcover Sales Growth Outpacing Ebooks in 2013. Available at http://www.forbes.com/sites/jeremygreenfield/2013/11/19/hardcover-sales Accessed April 26, 2014.

Kang, S. (2004) New options for cheaper textbooks; under fire for higher prices, publishers push alternatives; renting your chem book. *The Wall Street Journal, Aug. 24: D.1.*

Kranberg, S. (1999) Online retailing explosion hits the tranquil college textbook market. *Publisher's Weekly,* May 3, 20-22.

Marte, J. (2009) Tip of the week: Try renting textbooks. *The Wall Street Journal,* Sept. 20: 1.

Martin, A. (2013) Will the real textbook industry disruptor please stand up. Forbes.com: November 15. Online at*:* http://www.forbes.com/sites/realspin/2013/11/15/will-the-real-textbook-industry-disruptor-please-stand-up/. Accessed April 4, 2014.

McGowan, M. K., Stephens, P. R., and West, C. (2009) Student perceptions of electronic textbooks. *Issues in Information Systems*, 10:2, 459-465.

NACS–National Association of College Stores. (2013). Higher education retail market facts & figures, 2013. Retrieved January 8, 2013, from http://www.nacs.org/research/industrystatistics/higheredfactsfigures.aspx.

Rosen, J. (2013) Beyond book rental: the next big thing on campus. *Publisher's Weekly,* January 21, 8-9.

Senack, E. (2014) Survey shows students opting out of buying high-cost textbooks. U. S. Public Interest Research Group news release January 27, 2014. Available online at http://www.uspirg.org/news/usp/survey-shows-students-opting-out-buying-high-cost-textbooks, Accessed April 26, 2014.

Stone, R. W., and Baker-Eveleth, L. J. (2013) Students' intentions to purchase electronic textbooks. *Journal of Computing in Higher Education*, 25:27-47.

Talaga, J. A., and Tucci, L. A. (2001) Consumer tradeoffs in on-line textbook purchasing. *The Journal of Consumer Marketing*, 18:1 10-20.

Yang, B., Lo, P., and Lester, D. (2003) Purchasing textbooks online. *Applied Economics*, 35: 1265-1269.

Zhang, X. and Prybutok, V. R. (2005). A consumer perspective of e-service quality. *IEEE Transactions on Engineering Management,* 52(4), 461-471.

Institutional Communication Dynamics in Instructional Effectiveness: Development of a Student Self-Report Measure of FVP, LMX, and TMX in a Pedagogical Context

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ABSTRACT

Fractal vertical polarization (FVP) has joined leader-member exchange (LMX) and team member exchange (TMX) as one of the available models of communication dynamics based on complexity theory, which now all benefit from valid scales for use in organizational settings. The purpose of these models is to assess the quality of interpersonal information flow, which affects such outcomes as motivation and trust. High levels of FVP, or contrarily low levels of LMX or TMX, may obstruct communication flow and consequently interfere with people's ability to function at the peak of their capacities. This paper begins the process of developing self-report measures of these constructs in generalized form for student use in the context of instructional evaluation. The premise is that obstructions in communication flow at the institutional level in education may hamper student learning in the same way that these conditions obstruct motivation in productive enterprises. The result of the factor analysis presented herein is a usable set of scales, construable as student-perceived FVP, student-perceived generalized LMX, and student-perceived generalized TMX. The paper presents correlations with selected variables of interest, and concludes with recommendations for future research in this area.

INTRODUCTION

Of the many forces that affect students' ability to learn in the college setting, the quality of the flow of communication in the educational institution merits some exploration. For example, students may experience problems in trying to navigate school requirements due to confusion over where to find the requisite information (e.g., due to inadequately organized websites). This confusion may undermine their ability to learn in the classroom, either by injecting a feeling of futility into their relationship with the institution or by indirectly communicating to them

a lower set of expectations that those that the institution actually intends. The point is that the context of the student's relationship with the institution, which implicates institutional trust and loyalty, may hold students back in ways that have yet to become apparent in educational research.

Accordingly, the present study seeks to apply three theoretical constructs based in complexity theory to the educational setting. These constructs consist of fractal vertical polarization, generalized leader-member exchange, and generalized team-member exchange, or FVP, gener-

alized LMX, and generalized TMX, respectively. FVP refers to dysfunctions or obstructions in communication flow patterns generally along the vertical axis in organizations (Voss & Krumwiede, 2012). LMX similarly attends to the vertical axis, but the model instead looks for high quality (i.e., open, vibrant, and meaning interaction between leaders and subordinates) in this information flow (Graen & Cashman, 1975). Lastly, TMX looks at horizontal flows, again seeking high quality in their enactment (Seers, 1989). Of these constructs, LMX and TMX have an established history in organizational research, while FVP is a newer adjunct to the available theories based in complexity theory.

Historically, LMX and TMX have limited their scope to the immediate unit of analysis. Hence, the standard LMX questionnaire asks respondents to reveal information about communication flow patterns with their immediate supervisors. Similarly, the standard TMX questionnaire asks respondents to reveal information about their coworkers in a team context. FVP, by comparison, is a generalized construct, because its application seeks to enable respondents to reveal insights about the organizational communication flow in general, throughout the organization, rather than limiting that view to the immediate unit of analysis. Given the purpose of this study, to develop a self-report instrument that enables students to reveal insights about their institution as a whole, this study presents generalized construals of LMX and TMX as well, based on the recent work of Voss, Krumwiede, Lucas, and Fedorovich (2014).

LITERATURE REVIEW

Fractal vertical polarization consists of three ideas, each of which has meaning in the context of complexity theory, which is the antecedent paradigm of this theory (Voss & Krumwiede, 2009, 2010; Voss, Krumwiede, & Duncan, 2010). The element of polarization forms its basis, as early research into open or complex systems revealed a relationship between power asymmetries and obstructions in the flow of information (cf. Esteban & Ray, 1994; Tedeschi, 1968). The reference to vertical power asymmetries, as opposed to asymmetries along other possible communication axes, focused on the interaction between legitimate sources of organizational power and personal sources of power (French & Raven, 1959). To date, vertical lines of communication have constituted the main thrust of research into organizational polarization.

The fractal property referenced in the construct's nomenclature refers to the observation that one of the most regular characteristics of complex systems is their nature as self-replicating structures. Specifically, as any system in

this paradigm grows over time, its basic structure, such as the relative spacing between branches on a tree, replicates to form a larger structure that is self-similar on the dimension of scale, based on the same elemental structure (Chatterjee & Yilmaz, 1992; Chua, 2005). The concept of fractality began with Mandelbrot (1967, 1977), who originally called it a fractional property, emphasizing the consistent fraction of scale at which each level of analysis reveals the elemental structure anew. While it is easiest to point out fractality in a tree, given the similarity of proportional spacing that one observes among branches, then among the sprigs that sprout from those branches, and finally among the leaves that sprout from those sprigs, the property is visible in dynamic complex systems as well, such as organizations. In this case, the object of analysis is a cyclical event, rather than a physically static aspect of structure, which one could perceive easily (Katz & Kahn, 1978). Its abstraction makes it harder to analyze than a tree; nevertheless, the regularity of its elemental structure is indeed discernible with patience and an occasional epiphany. Regardless of the complex system at issue, studies of fractality require a qualitative examination of repetitive properties that evidently occur naturally from the interaction of the constituent agents (i.e., the elemental structure) of the system. Some studies have sought to quantify organizational fractality per se (e.g., Dooley & Van de Ven, 1999), but most applications to human organizations persist at the level of qualitative description.

Fractality is especially important in organizational research due to its ability to explain how some of the characteristics of communication exchange in the organization are within the perceptual range of individual respondents. For example, people in an organization may have a better grasp of the general patterns of communication exchange in parts of the organization that are invisible to them than they realize. LMX and TMX simply avoid this question, by refraining from asking questions about the organization at large, as opposed to the unit at hand (Graen & Cashman, 1975; Seers, 1989). FVP instead takes the approach of asking respondents about the organization as a whole (Voss et al., 2014). Indeed, the effort to develop a scale for this purpose revealed that the same outcome is achievable within the context of both LMX and TMX as well (Voss et al., 2014).

Traditional theories of interpersonal communication subdivide the observable process into discrete components. This approach characterized the early studies in communication theory (Phelps, 1942; Pollack, 1953). This model of communication is compatible with that implicit in FVP in the sense that the latter seeks to identify obstructions in the communication flow, which may indeed be observable at the point of encoding, transmitting the information, or decoding. In fact, much of FVP theory

focuses on the problem of decoding. Examples of decoding problems that may occur due to fractal obstructions in the information flow include eroded trust conditions in organizations, confusion that occurs due to cultural asymmetries (which imply issues with encoding as well), and perceptions of injustice (Gómez & Rosen, 2001; Voss et al., 2010).

Role theory overlaps with communication theory in this context, providing a model for understanding sources of confusion in people's perceptions of what their organizations expect from them (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Roethlisberger & Dickson, 1939). However, while role theory affords a way to understand primarily how problems of transmission may obstruct people's ability to discern accurately and thus respond adequately to expectations, the model is comparatively mechanical (Kahn et al., 1964). Merton (1945, 1957) has explained that people receive their expectations from others in the form of a single psychological gestalt, so conflicts among role-sendings enter the individual's mind as a confused mass of information, rather than a mathematical representation of logical compatibility or conflict. While Kahn et al. (1964) have included the issue of focal persons' personal values and beliefs as a moderator of how they receive their role-sendings, the effect of information obstructions on the emergence of contentions with trust or perceptions of justice have yet to enter role theory per se. In this respect, FVP fills a gap in role theory based on observations taken from complexity theory.

Causes of FVP may include differences in the assumptions driving encoding and decoding in the traditional communication model (Brannen, 2004). Actual obstructions in the communication channels may also be at fault (Daft, Lengel, & Treviño, 1987). Leadership styles may be too directive in nature for the leadership context, such as in the case of a dogmatic leader who tries to manage a team of experienced workers (Muczyk & Reimann, 1987). Effects of FVP may include the aforementioned erosion of the trust condition (Gómez & Rosen, 2001), an undermining of one's sense of procedural justice (Homans, 1961), and the associated confusion that comes from an inability to reconcile one's understanding of one's duty and how one feels about the person who has communicated that expectation (Thibault & Walker, 1975).

Meanwhile, FVP is qualitatively different from LMX, despite the obvious difference in positive versus negative wording (Voss et al., 2014). Specifically, even if one generalizes the LMX construct to enable respondents to reveal insights about the organization as a whole, rather than solely within their immediate units, the statistical relationship between LMX and TMX is no less strong than that between FVP and either of these constructs (Voss et

al., 2014). Scoring low on an LMX scale reflects low-quality information exchange along the vertical axis, but it conceals any evidence of actual obstructions. Even though obstructions along vertical communication linkages may indeed be the product of withholding information, at least in part, the distortions in those linkages that develop due to those obstructions change the nature of the relationship qualitatively. Thus, low LMX is capable of correction through training, to enhance the practice of the leader in engaging with subordinates. However, applying the same remedy to FVP might be inconsequential, as the self-reinforcing patterns of information obstruction will constantly confound those efforts. Instead, it is necessary to address FVP in a more fundamental way, including the physical relocation of parties with the noted entrenched patterns of interaction.

METHODOLOGY

Voss et al. (2014) developed a 27-item scale measuring a composite of two forms of FVP (construed as direct and indirect, respectively), along with generalized LMX and generalized TMX, for use in organizational research. The present study uses the same items, rewritten to fit the student experience, while attempting to extend the scales by contriving additional items in each area, resulting in a 40-item survey (i.e., 10 items per construct). The sample included N = 215 midcareer students at two different institutions, including both undergraduate and graduate students and a broad range of age levels (8% were over the age of 40). The two institutions were in the Southeastern and Northwestern United States, respectively, and 35% of the sample reported taking at least half of their courses online, while 34% reported being in traditional classroom environments exclusively. Most students in the sample were within one to two years of their expected graduation, and most students had completed at least an associate's degree. A plurality of the sample was within the range of 21-25 years of age, but 28.5% were over the age of 30. Meanwhile, 14% of the sample hailed from a country other than the United States. The racial composition of the sample was 63.2% European American, 12.7% African American, 7.5% Hispanic, 5.7% Arab, and 5.7% Chinese. Graduate students made up 13.7% of the sample.

Instrument

The scale featured 40 items using a 5-point Likert scale (1 = strongly disagree), of which 10 items represented generalized LMX, 10 represented generalized TMX, and 10 represented each of the two FVP facets revealed in Voss et al. (2014). The instrument also included a scale to measure social-desirability response bias (SDRB), which was an adaption of Crowne and Marlowe (1960), using the 10

strongest items, without alteration. However, this aspect of the study falls outside the intended range of the present factor analysis, in part because the expected interaction between SDRB and FVP was absent in the resulting data and therefore obviated the utility of the SDRB scale. Student respondents took the survey in an online format, using the Qualtrics™ survey platform, in response to a blanket message with the associated link. There was no mechanism for tracking individual responses by student identity, as the intention was to make the survey voluntary and thus bypass any inadvertent effects from pressure to answer in any particular way.

Results

The factor-analytic procedure began with a review of Eigenvalues and the scree plot, using all 40 items in the composite FVP, LMX, and TMX scale. The scree plot indicated six factors (see Figure 1), while the Eigenvalue (Kaiser) criterion indicated the presence of 11 factors. The analytical phase of the study therefore proceeded by running the first analyses with a specification of six factors, using varimax rotation. The criterion by which to remove items from the analysis was to identify any item whose

strongest loading on one factor lay within $r < .14$ of the same item's next strongest loading on another factor. This conservative choice of exclusionary principle corresponded to a significance threshold of $\alpha = .05$ for a sample of this size, and the procedure appeared to work smoothly with this feature. (This was the same approach taken in Voss et al., 2014, which worked equally well.)

At the end of this first round, the sixth factor consisted of only two items. One was a TMX item ("we often make suggestions about better study methods to our fellow students"). The other was an FVP item ("some people seem to do everything, while others seem to do nothing"). The lack of obvious theoretical relationship between these items led to the decision to rerun the entire analysis without them, thus specifying five factors in the next run.

In the midst of the process of rerunning the analysis while specifying five factors and having removed the two previously noted items, the Eigenvalue criterion fell short of specifying at least five factors. Consequently, it was reasonable to run the same analysis (i.e., two items short), while specifying four factors instead. The result was a stable 5-factor model, but one LMX item ("I have a lot in common with my professors") loaded on the TMX fac-

FIGURE 1
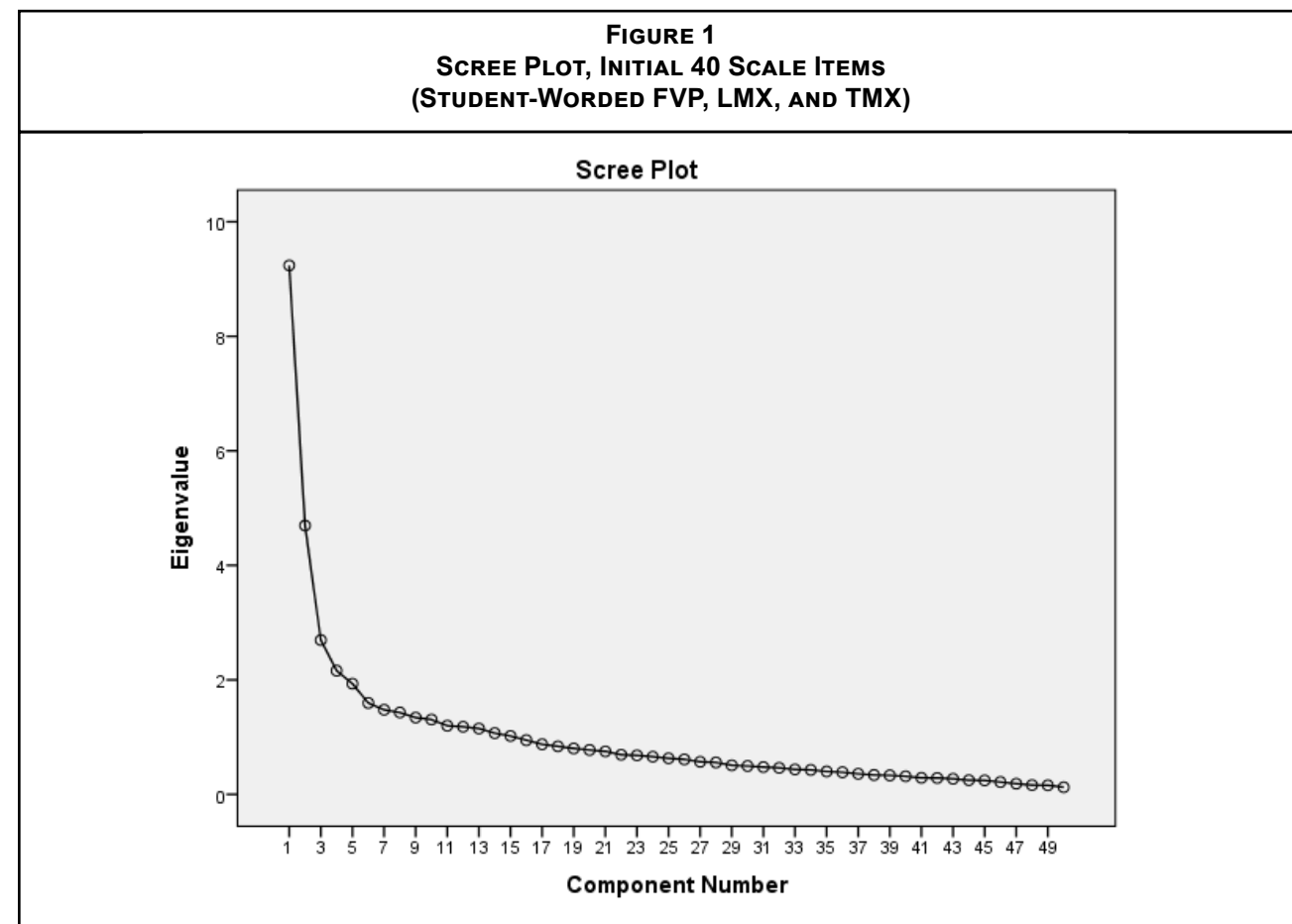### SCREE PLOT, INITIAL 40 SCALE ITEMS
(STUDENT-WORDED FVP, LMX, AND TMX)

TABLE 1
FACTOR-ANALYTIC RESULTS, STUDENT FVP SCALE

	F1	F2	F3	Key	Item
1	.674			+	I am too often left in the dark about what my institution is up to.
2	.669			+	To get along, you have to pretend to respect your professors.
3	.638			+	Leaders have little conception of the administrative confusion we face as students.
4	.604			+	The staff too often blame students for failure.
5	.595			+	There is too much secrecy in this institution.
6	.591			+	Around here, obedience is more important than courage.
7	.566			+	The use of threats and penalties is normal here.
8	.558			+	This institution could use more real leadership and less posturing.
9	.554			+	It is best not to stick your neck out around here.
10	.516			+	The administration rejects suggestions for changes.
11	.514			+	Our professors should discuss institutional issues with us more.
12	.496			+	I don't usually expect the staff to carry out the real duties of management.
13	.453			+	It is often easier to solve a problem yourself than it is to ask a staff worker.
14	.431			+	Administrators should come into the trenches more often to see what it's like down here.
15		.721		+	The administration in my institution usually takes responsibility for its own mistakes.
16		.691		+	This institution believes in fairness and justice.
17		.652		+	The staff tries hard to work with the students.
18		.650		+	Administrators actively seek input on ways to make the institution function better.
19		.590		+	The professors treat their students as equals.
20		.581		+	Faculty are very reasonable about how to handle problems when they occur.
21		.556		+	Administrators seek appropriate feedback from students when making big decisions.
22			.734	+	My fellow students would come to the rescue if I had a problem.
23			.624	+	My fellow students and I are open and honest with each other.
24			.592	+	There is good camaraderie among the students.
25			.584	+	I often spend time with my fellow students outside of the classroom as well.
26			.564	+	With difficult tasks, students openly ask one another for help.
27			.445	+	I usually have no problem helping out other students when necessary.

Notes: F1 = student-perceived fractal vertical polarization (FVP); F2 = student-perceived generalized LMX; F3 = student-perceived generalized TMX. Item wording is implicitly positive for LMX and TMX, and negative for FVP, so all keying is positive.

tor. A review of its compatibility with the other items on that factor suggested removing the item from the list and rerunning the analysis while again specifying four factors.

The result was again a stable 4-factor solution, but the content of Factor 4 included three items that seemed to reflect a combination of wording (viz., repetition of the word professors) and possibly irrelevance to the student experience (hence, their content may have confused the respondents, which in turn caused them to load on their

own factor). The two similar items were "some professors will take credit for your ideas" and "my professors often make unreasonable requests of me." While both of these items might reflect the experience of a doctoral student, the study only included students working toward their bachelor's or master's degrees, with virtually no presence of graduate assistantships to place students in ethically compromising positions. The third item ("this institution's staff expect students to do their jobs for them") is likely to have loaded onto this factor precisely because it

constitutes another type of experience that is rare in this sample. Thus, the presence of this fourth factor probably reflects a tendency for respondents to answer in a way that reflects confusion over the content of the item, rather than a particular pattern of variance that would render these three items reflective of the same phenomenon. The final step was therefore to remove these items from the list and then rerun the analysis, specifying three factors.

The next run produced a stable 3-factor structure, but one of the TMX items ("we openly discuss issues and problems in the classroom") loaded on the LMX factor. Further reflection suggested that many of the respondents must have understood this item to refer to the formal classroom structure, rather than to fellow students, hence this outcome, but the item-factor loading was modest (r = .389) compared to the remaining items on that factor, possibly indicating some degree of uncertainty over its meaning. Consequently, the decision was to rerun the analysis without that item.

The final run produced a stable 3-factor structure, in which all FVP items loaded on the same factor, all LMX items loaded on the second factor, and all TMX items loaded on the third factor. The student-perceived FVP scale ended up with 14 items in all, while generalized student LMX had seven items, and generalized student TMX had six items.

The final solution produced a surprising finding, given the earlier discovery (Voss et al., 2014) that FVP seemed to have two subsidiary forms. This time, FVP emerged as a unidimensional construct, consistent the original expectations of the theory. This unidimensionality expectation was also consistent with the original scale development effort behind LMX (Graen, Dansereau, Minami, & Cashman, 1973). The generalized-LMX subscale emerged with a degree of strength similar (in terms of number of items and reliability properties) to that previously identified in Voss et al. (2014), but the generalized-TMX scale was considerably stronger in the present case, producing six retained items and showing a reliability close to r = .70. While the latter scale remains weaker than desired and therefore suggests further efforts to build upon it, the result herein seems usable in research already.

Correlation Matrix

Table 2 provides a correlation matrix using the foregoing scale and the demographic items discussed previously. Surprisingly, FVP shows no significant correlations with any of the demographic constructs. Given the nature of the FVP items, many of which include wording that would be hard to express for many people in an open forum, this result suggests that the FVP subscale is quite robust. Between generalized LMX and generalized TMX, however, there is some evidence of correlation with some of the other variables. For example, generalized LMX correlates negatively with the level of one's prior degree. However, this is probably an artifact of the data set, given that the same relationship is unapparent with educational level per se. For its part, generalized TMX correlates negatively with age and positively with educational level. This outcome may be an artifact of the extent to which one experiences team structures in the classroom at the different grade levels. In this sample, older students are more likely to be undergraduate students, given the nontraditional component of the sample. The age effect may be an artifact of the data set, but the relationship between LMX and educational level seems quite meaningful. That is, the graduate students in the sampling frame are largely MBA students in a traditional classroom environment, who are more likely to experience team-based assignments. The presence of team-based assignments therefore appears to enhance reports of generalize team-member exchange. If so, then this observation attests to the general effectiveness of team-based structures educational settings.

Lastly, the correlations among the key scale variables are an important observation. The strongest correlation is the negative one between FVP and generalized LMX. While these constructs are indeed independent, notably after sorting through a factor-analytic process involving a manifestly conservative exclusionary criterion, it remains important to clarify this distinction through further item refinement. The large number of FVP items, for example, is unnecessary, so if the removal of those items from this subscale that load with weaker item-factor correlations may improve the clarity of the distinction between FVP and generalized LMX, it would appear wholly feasible to do so. Meanwhile, a surprising outcome on this measure is the insignificant correlation between FVP and generalized TMX, despite the strong correlation between the latter and generalized LMX. In Voss et al. (2014), generalized LMX and TMX showed a stronger intercorrelation than that between FVP (in the form of either subscale) and either LMX or TMX.

DISCUSSION

The goal of this study was to lay the basis for bringing FVP and associated constructs (viz., generalized LMX and generalized TMX) into the role of evaluating educational institutions on the quality of their communication flow patterns. The premise is that students' experience with their educational institution may help or hinder their classroom performance, for the same reasons for which employees' experience with their organizations on this measure affect their motivation and sense of trust in their leadership. This study accordingly presented the factor-analytic results of a survey of a broad range of mostly midcareer students at two different institutions of higher learning, in two different parts of the country. The results produced three scales of some utility to investigating the effect of institutional factors on student learning, using a theoretical model based in complexity theory.

The next logical step in this study is to undertake refinement of many of the items and replicate the procedure on a new sample. The goal would be to enhance the generalized-TMX scale toward a reliability level similar to what characterizes the FVP and generalized-LMX scales. The FVP scale is also rather lengthy in this study, and there remains the question of whether to retain those items that reference administrators or staff members, as it is difficult to ascertain how the student respondents actually understood these concepts from their unique perspective as students. The question of whether to reduce the FVP scale to a much shorter, unidimensional presentation is also important.

While the scale presented herein would appear to be sufficient for use in actual application to assess the impact of institutional characteristics on student achievement, the objective should nevertheless be to improve its statistical properties, notably on the matter of generalized TMX. After this development, future research should thence pursue answers to the question of what effects institutional communication dynamics may have on student performance. An interesting point of comparison on this topic is the question of what effect school spirit has on student performance, as it is likely that the constructs bear a meaningful relationship. For its part, LMX enhances each employee's tendency to express loyalty to the leader. This loyalty correlates with additional efforts on the part of the affected employees to do well in their roles. If the same is true among students, the combination of FVP, generalized LMX, and generalized TMX may reveal important insights about how to engage students more effectively in the classroom through their relationship with the institution.

The primary limitation in this study is the sample size. While large enough for most purposes at N = 215, the particular shape of the scree plot suggests an uneven distribution of variance. As a result, the factor-analytic process itself becomes harder to manage, as the changing distribution of the rotated model often behaves with some lack of predictability with each subsequent run of the analysis. The common conception about factor analysis is that it is indeed necessary to have a very large sample to ensure a balanced outcome. While there is no consensus over what the ratio should be, it seems reasonable to conclude that the present study would have benefited from a more substantial base.

REFERENCES

Brannen, M. Y. (2004). When Mickey loses face: Recontextualization, semantic fit, and the semiotics of foreignness. *Academic of Management Review, 29*, 593-616. doi:10.2307/20159073

Chatterjee, S., & Yilmaz, M. R. (1992). Chaos, fractals, and statistics. *Statistical Science, 7*(1), 49-68.

TABLE 2
CORRELATION MATRIX—DEMOGRAPHICS AND SCALE ITEMS

		1	2	3	4	5	6	7	8	9
1	Online	—								
2	Graduating soon	.01	—							
3	Degree in hand	–.14*	.19**	—						
4	Age	.41**	.07	.14*	—					
5	Gender	.21**	–.22**	–.22**	–.07	—				
6	Educ. level	–.24**	.27**	.58**	–.01	–.13	—			
7	Student FVP	–.10	.01	.05	–.12	–.08	.02	[.84]		
8	Student gLMX	.08	–.03	–.14*	–.02	.06	–.10	–.43**	[.81]	
9	Student gTMX	–.27**	.15*	.06	–.16*	–.06	.21**	–.06	.39**	[.68]

*p < .05; **p < .01 (2-tailed tests)

Notes: Bracketed items on the diagonal are reliability coefficients (Cronbach's alpha). Demographic variables: online (frequency); graduating soon (proximity); degree in hand (college level completed); age (categories); gender (1 = male; 2 = female); educational level (1 = undergraduate; 2 = graduate).

Chua, L. O. (2005). Local activity is the origin of complexity. *International Journal of Bifurcation and Chaos*, *15*, 3435-3456.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, *24*, 349-354.

Daft, R. L., Lengel, R. H., & Treviño, L. K. (1987). Message equivocality, media selection, and manager performance: Implications for information systems. *MIS Quarterly*, *11*, 355-366.

Dooley, K. J., & Van de Ven, A. H. (1999). Explaining complex organizational dynamics. *Organization Science*, *10*, 358-372.

Esteban, J.-M., & Ray, D. (1994). On the measurement of polarization. *Econometrica*, *62*, 819-851.

French, J. R. P., Jr., & Raven, B. H. (1959). Bases of social power. In D. Cartwright (Ed.), *Studies in social power* (pp. 150-167). Ann Arbor, MI: University of Michigan Press.

Gómez, C., & Rosen, B. (2001). The leader-member exchange as a link between managerial trust and employee empowerment. *Group and Organization Management*, *26*(1), 53-69. doi:10.1177/1059601101261004

Graen, G. B., & Cashman, J. F. (1975). A role making model in formal organizations: A developmental approach. In J. G. Hunt & L. L. Larson (Eds.), *Leadership frontiers* (pp. 143-165). Kent, OH: Kent State Press.

Graen, G. B., Dansereau, F., Jr., Minami, T., & Cashman, J. F. (1973). Leadership behaviors as cues to performance evaluation. *Academy of Management Journal*, *16*, 611-623.

Homans, G. C. (1961). *Social behavior: Its elementary forms*. New York, NY: Harcourt, Brace.

Kahn, R. L., Wolfe, D. M., Quinn, R., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress*. New York, NY: Wiley.

Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York, NY: Wiley.

Mandelbrot, B. B. (1967). How long is the coast of Britain? Statistical self-similarity and fractional dimension. *Science*, *156*, 636-638. doi:10.1126/science.156.3775.636

Mandelbrot, B. B. (1977). *Fractals: Form, chance and dimension*. San Francisco, CA: Freeman.

Merton, R. K. (1945). Sociological theory. *American Journal of Sociology*, *50*, 462-473.

Merton, R. K. (1957). *Social theory and social structure*. Glencoe, IL: Free Press.

Muczyk, J. P., & Reimann, B. C. (1987). The case for directive leadership. *Academy of Management Executive*, *1*, 301-311.

Phelps, O. W. (1942). A theory of business communication. *Journal of Business of the University of Chicago*, *15*, 343-360.

Pollack, I. (1953). Assimilation of sequentially encoded information. *American Journal of Psychology*, *66*, 421-435.

Roethlisberger, F. J., & Dickson, W. J. (1939). *Management and the worker*. Cambridge, MA: Harvard University Press.

Seers, A. (1989). Team-member exchange quality: A new construct for role making research. *Organizational Behavior and Human Decision Processes*, *43*, 118-135. doi:10.1016/0749-5978(89)90060-5

Tedeschi, J. T. (1968). A theory of social influence within dyads. Paper presented at the 16th International Congress of Applied Psychology, Amsterdam, Netherlands.

Thibault, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Earlbaum.

Voss, R. A., & Krumwiede, D. W. (2009). Fractal vertical polarization: Outline of the theory and exploration into its impact on supply chain management. *Proceedings of the Decision Sciences Institute*, 5061-5066.

Voss, R. A., & Krumwiede, D. W. (2010). Fractal vertical polarization: Development of a nomological net. *Proceedings of the Decision Sciences Institute*, 4851-4856.

Voss, R. A., & Krumwiede, D. W. (2012). Fractal vertical polarization: Definition and nomological elaboration of a complexity-based theory of organizational power and dissonance. *International Journal of the Academic Business World*, *6*(1), 69-84.

Voss, R. A., Krumwiede, D. W., & Duncan, E. L. (2010). Through a fractal prism: Ethics as a function of fractal vertical polarization. *Proceedings of the Troy University Business Research Symposium*.

Voss, R. A., Krumwiede, D. W., Lucas, A. D., & Fedorovich, S. M. (2014). The subordinate FVP scale: Factor-analytic results and presentation of the final version of a self-report measure of fractal vertical polarization from the perspective of the lower dyadic node. *International Journal of the Academic Business World*, *8*(1), in press.

Technology Knowledge Self-Assessment and Pre-test Performance Among Digital Natives

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ABSTRACT

According to education pundits, traditional-age college students are "digital natives" inherently savvy in digital technology due to their constant exposure to technology from an early age. This widely held meme is at odds with observation in the college classroom. In this research, college students in an introductory information technology course are surveyed prior to instruction regarding perceptions of their own technological expertise in hardware, software, networking, research, computer graphics, computer security, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint. Students are then given pre-tests to assess their expertise in these topics based on course standards. Data from the survey and the pre-tests are analyzed. Although students self-assess slightly greater expertise in areas in which they actively use computers (Windows, Word, PowerPoint, and Research), they generally do not claim technological expertise. This lack of expertise is confirmed in pre-tests scores. Data analysis provides no support for the "digital native" meme.

INTRODUCTION

Among the several monikers attached to the current generation of traditional-age students, "digital natives" might be the most misleading. Coined by educational futurists in the early 2000s, the digital native meme suggests individuals born after a certain date are naturally fluent with modern information technologies (Prensky, 2001). Just as small children learn language through constant exposure in their preschool years, digital natives supposedly became fluent in computing and telecommunications technologies because these digital technologies were ubiquitous in their childhood environment. Thus, these digital natives do not need to be taught about technology—they "just do it." In contrast, older generations are not so fortunate. They are "digital immigrants" who are always awkward in the digital environment, never quite comfortable in the foreign land of technology in which they did not grow-up.

The "digital native" meme has obvious logical flaws (technology creators were digital immigrants, for example). Even so, this meme has proven quite popular in both the educational environment and in popular culture. In some colleges, it has even guided curriculum decisions. However, research and deeper investigation does not support its veracity (Bennet, Maton, & Kerin, 2008; Brown & Czerniewicz, 2010; Brumberger, 2011; Helsper & Eynon, 2010; Margaryan, Littlejohn, & Vojt, 2011; Ng, 2012; O'Neil, 2014).

Despite being repeatedly discredited, the digital native myth persists. But what do the "digital natives" think? Having grown-up surrounded by technology and having been told their entire lifetimes (by some) they are knowledgeable about technology, do they consider themselves technologically adept? How well do they perform when confronted with questions or tasks involving technology? Students' self-assessment of their own expertise influences their attitude and perceptions about the need to study in courses involving technology.

BACKGROUND

The National Research Council's Fluency in Technology model (National Research Council, 1999) provides the framework for the introductory technology course in which this research is conducted. The NRC states fluency in information technology is composed of three components – contemporary skills (accomplish common tasks using today's technology), foundation concepts (understand basic principles and ideas underlying technology), and intellectual abilities (use technology to address complex problems). Course assignments and testing are designed to develop technological fluency among students.

Course Technology's SAM Office 2010 training and testing system is used to teach contemporary skills in Microsoft Word, Excel, and PowerPoint. SAM's training modules provide a conceptual framework for each skill then demonstrates the skill online. Students are then required

to perform the skill for SAM to provide graded credit. Instruction is at the level of Course Technology's New Perspectives series introductory textbook (Shaffer, et al., 2011) with a handful of advanced topics in Word and Excel specifically requested by upper division course instructors.

Lecture, classroom activities, readings, and digital videos are used to teach concepts about hardware, software, networking, research, computer graphics, security as well as word processing, spreadsheets, and presentations. Content in these topics is based on Internet & Core Computing Certification Global Standard 4 (CertiPort, n.d.) at the level of a widely used college technology literacy textbook (Parsons & Oja, 2011) and augmented based on information literacy guidelines from the American Library Association (n.d.).

SAM 2010 online tests are used to evaluate skills mastery. SAM simulates a screen from Word, Excel, or PowerPoint and requires students to complete a defined task (such as create a new style in Word or edit a pivot table in Excel). SAM allows up to three attempts by the student before rendering a pass/fail assessment on that individual task. Skills tests in this course contain approximately 50 tasks.

Concept tests are conducted using the Moodle learning management system. Questions are primarily multiple-choice with some true-false, matching, and short answer. For each concept to be tested, Moodle maintains multiple equivalent questions in a test bank. Tests are generated individually for each student by assembling randomly selected test bank questions. Thus, each student has a different but equivalent test.

The instructor administers skills and concepts pre-tests prior to instruction in this course. The SAM skills pre-tests are the same tests administered later in the semester for course credit. The concepts pre-tests are modified versions of the course final exam (questions about course-specific activities found in the final exam are removed from the pre-tests).

METHODOLOGY

This research study was conducted in three freshman-level information technology courses in Fall 2013. There were 41 students in the study. Most students were first semester freshman of traditional age and were graduates of suburban high schools. A few students were sophomore or juniors transfers. Students not in their late teens were in their early-to-mid twenties.

In the first week of the course, the author administered a survey asking students to rate their perceived expertise in course topics (see Figure 1). Students were instructed
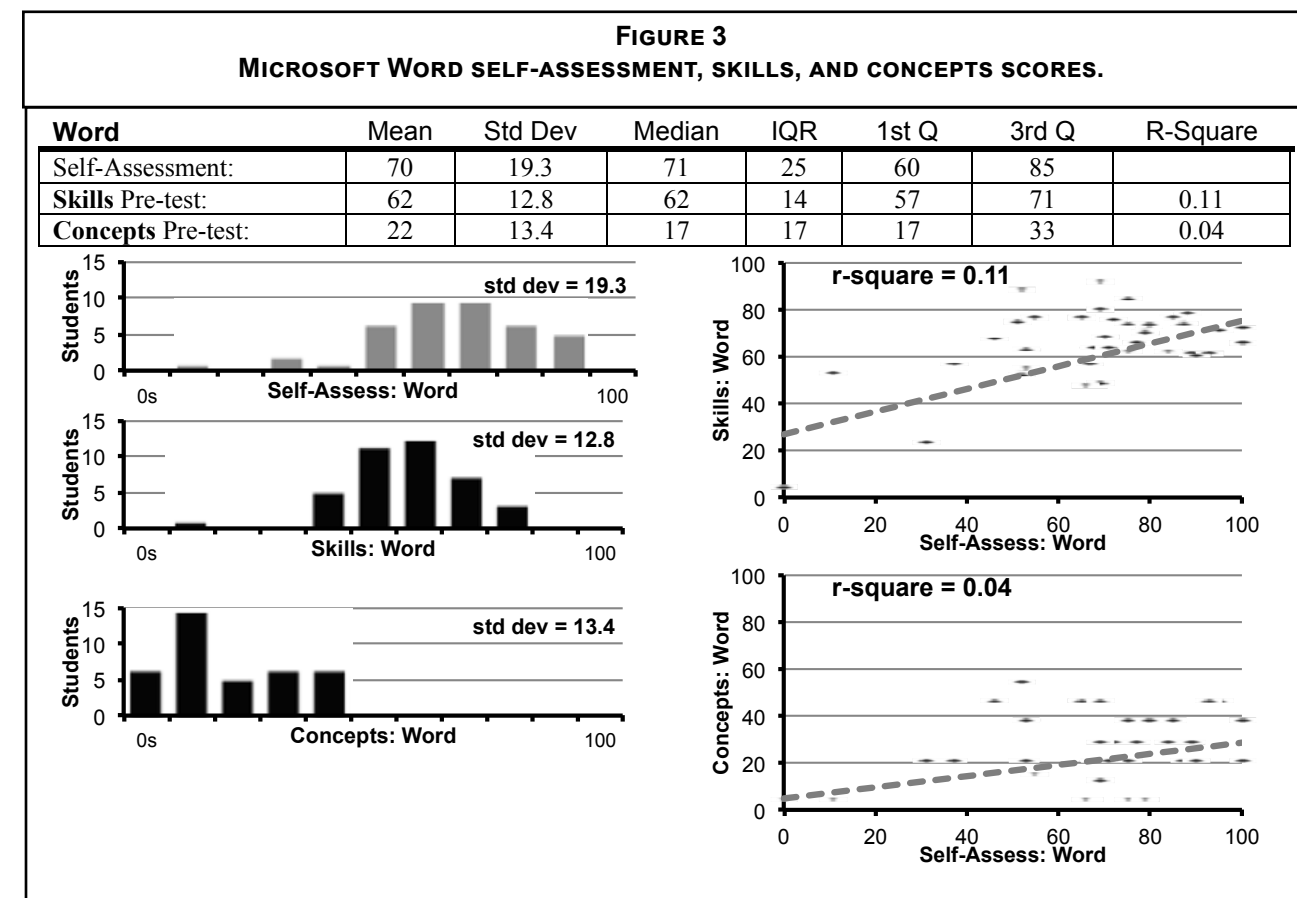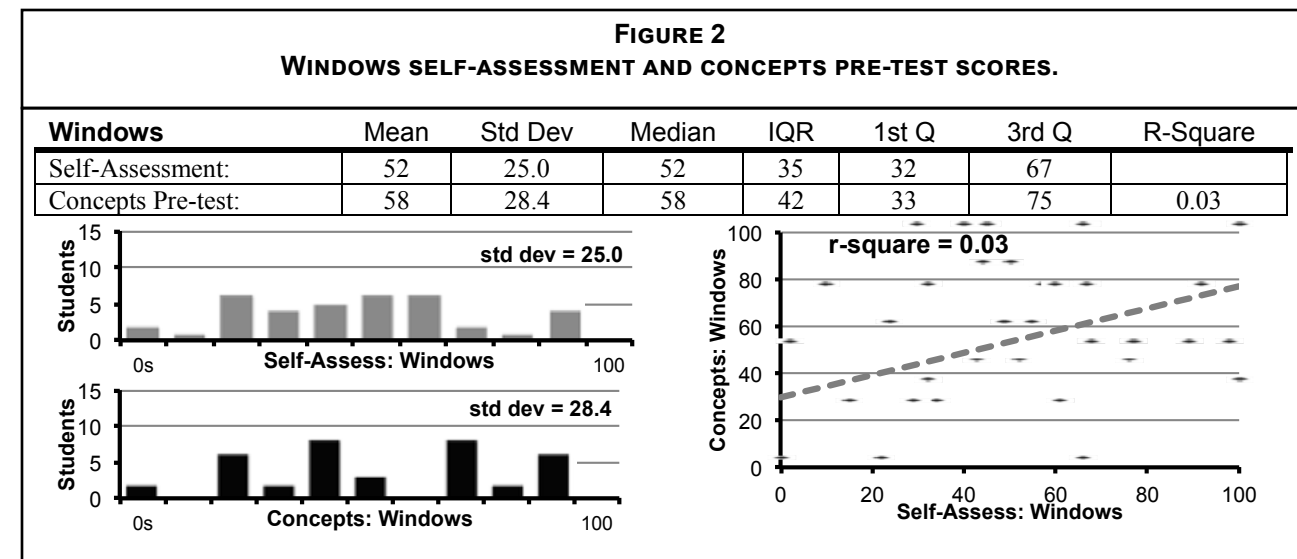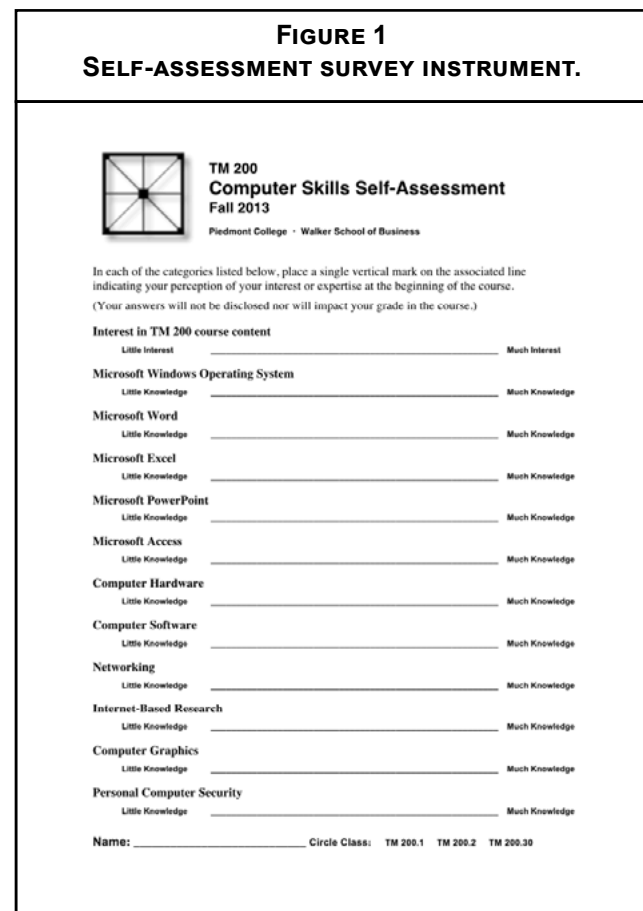
to mark the line associated with each topic based on assessment of his or her existing knowledge (Aiken, 1996). This graphical rating scale was later measured and student responses were recoded to a 0-to-100 scale.

Prior to course instruction, students completed the concepts pre-test and the SAM 2010 skills pre-tests for Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

RESULTS

Figures 2 through 11 provide the mean, standard deviation, median, interquartile range, first quartile, and third quartile for each self-assessment and pre-test distribution. The r^2 coefficient of determination between each self-assessment and its associated pre-test is provided. Data from each distribution are binned and displayed in histograms. A scatterplot displays the relationship between each student's self-assessment and pre-test score. Note that Microsoft Word, Microsoft Excel, and Microsoft PowerPoint have both skills pre-tests and concepts pre-tests and thus have two sets of pre-test distributions and graphs.

At the aggregate level, students assess a modest level of expertise in using the Microsoft Windows operating system.

FIGURE 1
SELF-ASSESSMENT SURVEY INSTRUMENT.

FIGURE 2
WINDOWS SELF-ASSESSMENT AND CONCEPTS PRE-TEST SCORES.

Windows	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	52	25.0	52	35	32	67	
Concepts Pre-test:	58	28.4	58	42	33	75	0.03

FIGURE 3
MICROSOFT WORD SELF-ASSESSMENT, SKILLS, AND CONCEPTS SCORES.

Word	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	70	19.3	71	25	60	85	
Skills Pre-test:	62	12.8	62	14	57	71	0.11
Concepts Pre-test:	22	13.4	17	17	17	33	0.04

The means, standard deviations, and interquartile ranges of self-assessment and concept test performance appear reasonably consistent. At the individual student level, however, there is little correlation between self-assessed knowledge and performance in the concepts pre-test.

At the aggregate level, students profess greater self-assessed expertise in Microsoft Word than any other topic. The aggregate performance on skills testing is only slightly lower ($\mu=62$) than the professed expertise ($\mu=70$). However, the aggregate performance on the concepts pre-text is much

lower (μ=22). At the individual student level, the correlation between self-assessed knowledge and skills performance is slight but correlation between self-assessment and the concepts pre-test score is practically non-existent.
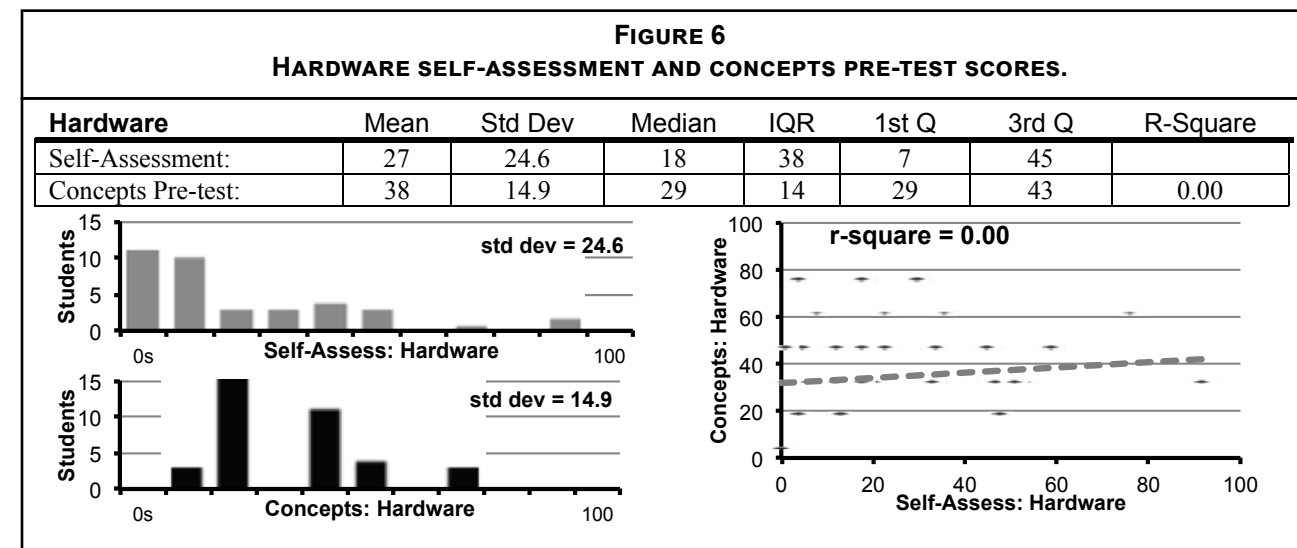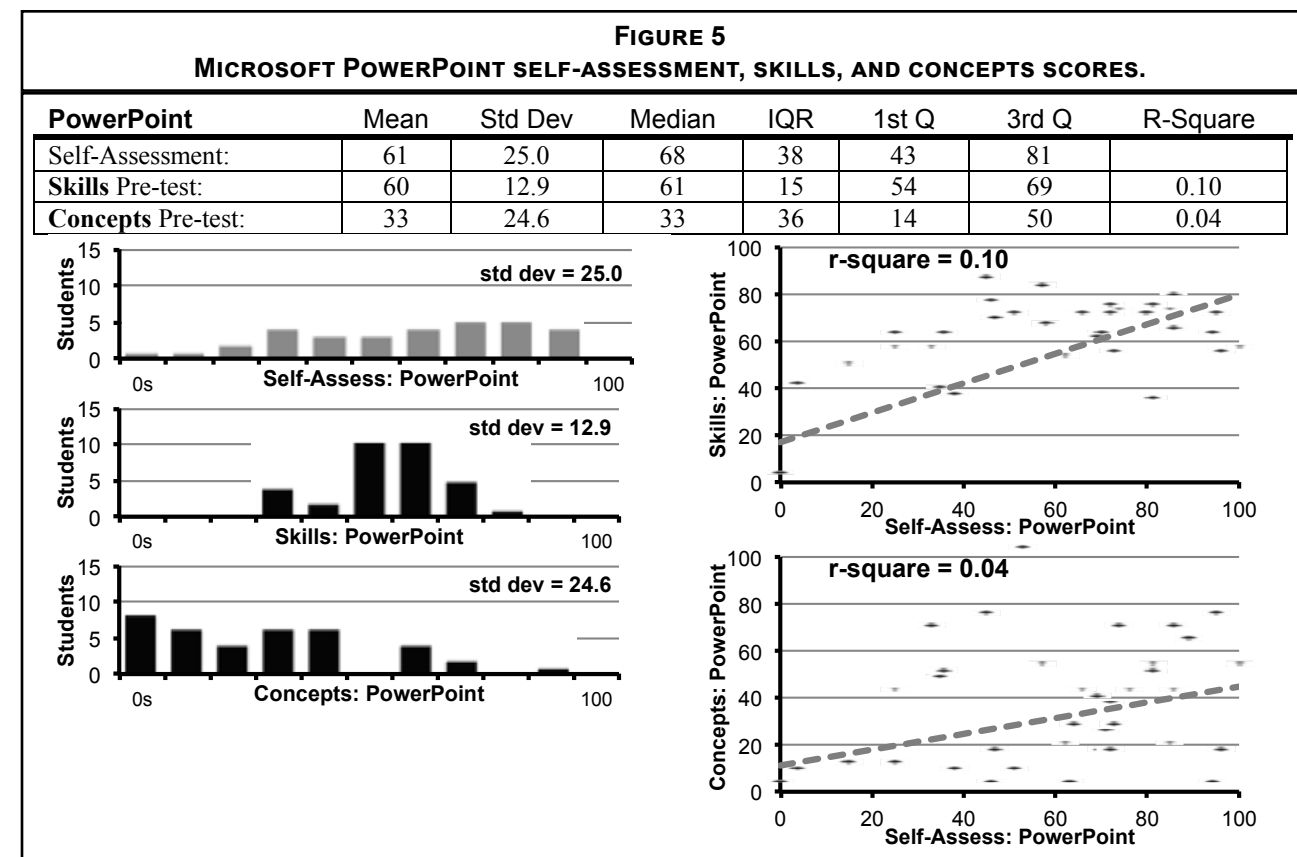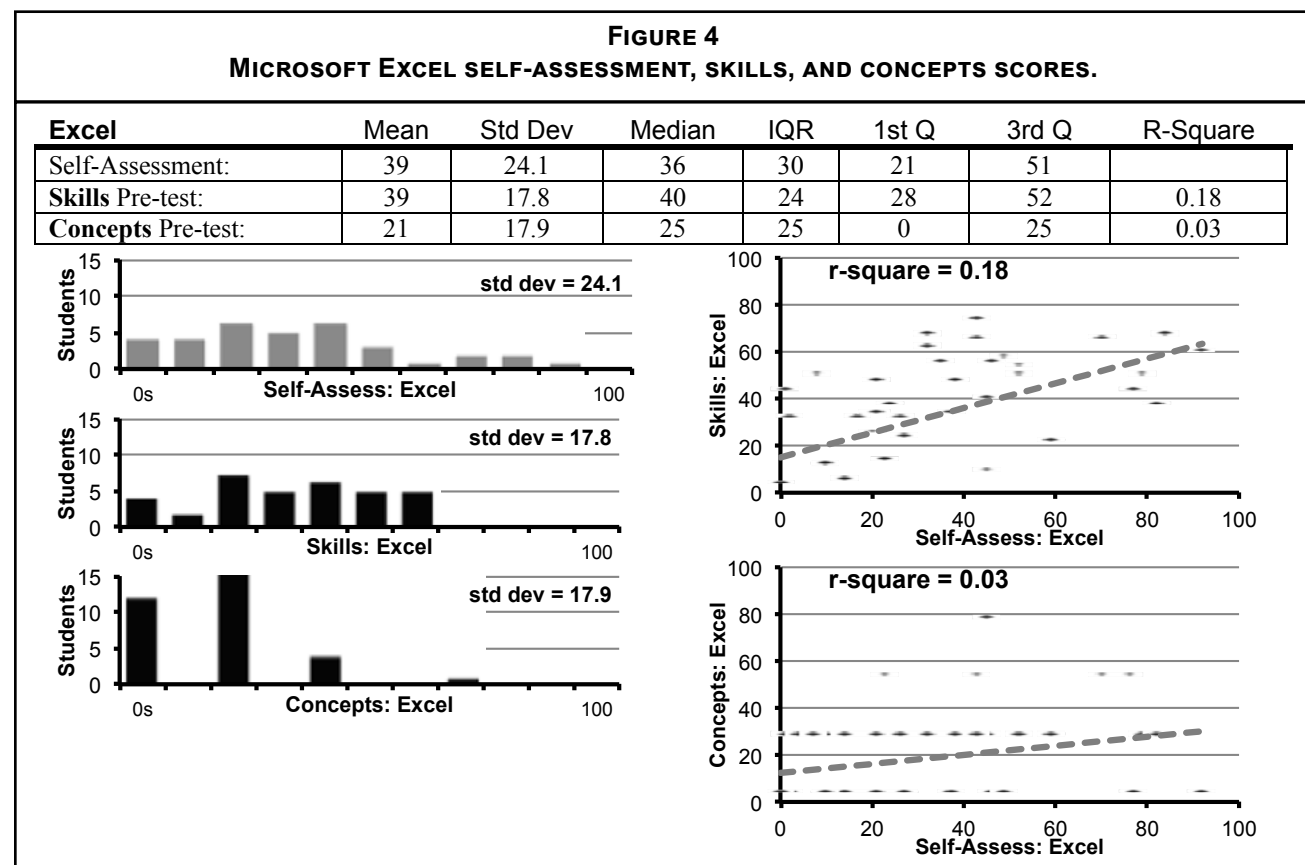
At the aggregate level, students did not profess as much expertise in Excel as they did in Word and PowerPoint. The aggregate self-assessment distribution was very consistent with aggregate performance on the skills pre-test (both with μ=39). Aggregate performance on the concepts test was very poor. At the individual level, the correlation between self-assessed knowledge and skills performance is the second highest in this study (r²=0.18). Correlation between self-assessment and the concepts pre-test score is practically non-existent.

At the aggregate level, student self-assessed expertise in PowerPoint is second only to their perceived expertise in Microsoft Word. The means of the self-assessment (μ=61) and skills pre-test (μ=60) are consistent, though the standard deviation and interquartile range for the skills test are much smaller. While the performance on the concepts pre-test is again much poorer than in the skills pre-test, scores for the PowerPoint concepts test are noticeably higher than those in Word or Excel. At the individual student level, correlation between self-assessment and performance is poor.

Aggregate self-assessment data indicates students have little confidence in their hardware knowledge. Performance in the concepts pre-test was actually slightly better than aggregate self-assessment – likely due to the multiple-choice nature of the pre-test. The bulk of the students scored at the level of "guessing" on hardware questions (approximately 25%). At the individual student level, the correlation between self-assessed knowledge and test performance is zero.

Aggregate self-assessment for software is very similar to the self-assessment for hardware above – students profess very little expertise. Performance on the software concepts pre-test was better than for the hardware pre-test and actually better than the self-assessment (though this is likely an artifact of a multiple-choice testing environment). At the individual level, correlation between self-assessment and concepts test performance (r²=0.19) is higher than any other correlation in the study.
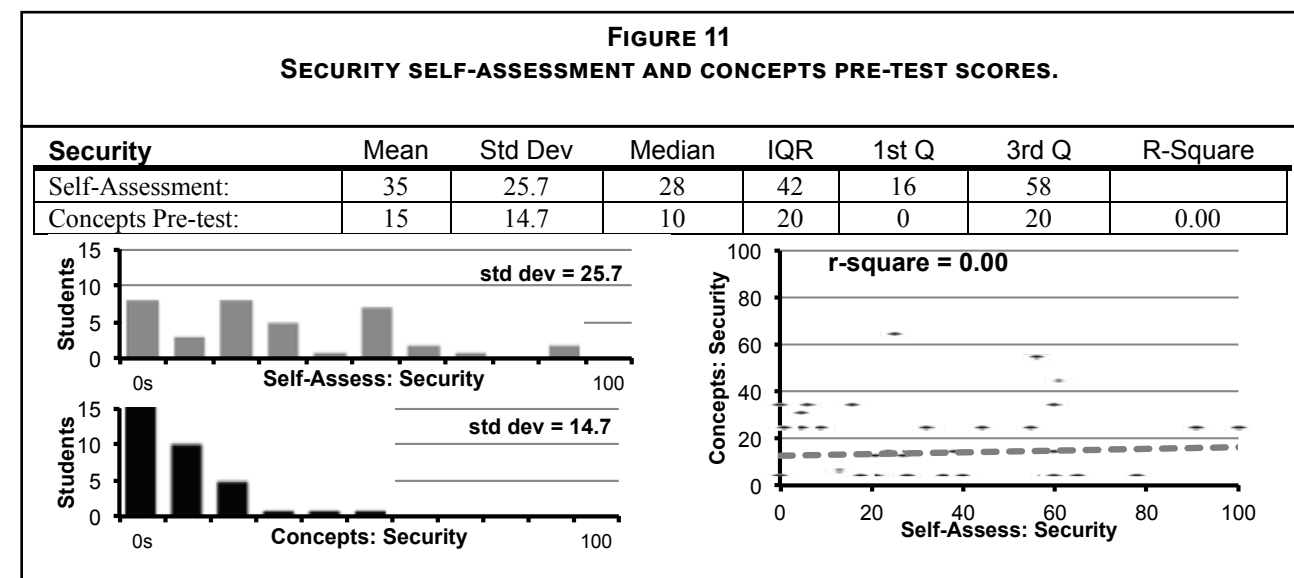
Despite seemingly constant use of networking and telecommunications technologies, students generally professed little expertise in networking. In the aggregate, concept pre-test scores are consistent with self-assessments. There is no correlation between perceived expertise and pre-test performance.

FIGURE 4
MICROSOFT EXCEL SELF-ASSESSMENT, SKILLS, AND CONCEPTS SCORES.

Excel	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	39	24.1	36	30	21	51	
Skills Pre-test:	39	17.8	40	24	28	52	0.18
Concepts Pre-test:	21	17.9	25	25	0	25	0.03

FIGURE 5
MICROSOFT POWERPOINT SELF-ASSESSMENT, SKILLS, AND CONCEPTS SCORES.

PowerPoint	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	61	25.0	68	38	43	81	
Skills Pre-test:	60	12.9	61	15	54	69	0.10
Concepts Pre-test:	33	24.6	33	36	14	50	0.04

FIGURE 6
HARDWARE SELF-ASSESSMENT AND CONCEPTS PRE-TEST SCORES.

Hardware	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	27	24.6	18	38	7	45	
Concepts Pre-test:	38	14.9	29	14	29	43	0.00

At the aggregate level, students self-assess research expertise at a level similar to their self-assessment in Windows and indicate a relatively high level of perceived expertise. Performance in the concepts pre-test, however, is much lower and is lower than performance in other topics with less perceived expertise (see hardware and networking). At the individual student level, there is no correlation between self-assessed knowledge and concepts pre-test scores.

Review of aggregate data suggests most students profess little knowledge in the area of computer graphics with a few students indicating significant knowledge. Aggregate performance on the graphics pre-test is consistent with self-assessed knowledge. At the individual student level,

FIGURE 7
SOFTWARE SELF-ASSESSMENT AND CONCEPTS PRE-TEST SCORES.

Software	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	27	26.1	15	29	8	37	
Concepts Pre-test:	42	21.8	50	25	25	50	0.19

FIGURE 8
NETWORKING SELF-ASSESSMENT AND CONCEPTS PRE-TEST SCORES.

Networking	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	27	22.8	23	25	12	37	
Concepts Pre-test:	26	13.0	25	25	13	38	0.02

FIGURE 9
RESEARCH SELF-ASSESSMENT AND CONCEPTS PRE-TEST SCORES.

Research	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	52	25.1	51	43	31	74	
Concepts Pre-test:	27	17.8	25	29	8	38	0.00

FIGURE 10
GRAPHICS SELF-ASSESSMENT AND CONCEPTS PRE-TEST SCORES.

Graphics	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	30	28.2	20	48	8	56	
Concepts Pre-test:	25	16.2	25	10	20	30	0.00

FIGURE 11
SECURITY SELF-ASSESSMENT AND CONCEPTS PRE-TEST SCORES.

Security	Mean	Std Dev	Median	IQR	1st Q	3rd Q	R-Square
Self-Assessment:	35	25.7	28	42	16	58	
Concepts Pre-test:	15	14.7	10	20	0	20	0.00

there is no correlation between self-assessed knowledge and concepts pre-test performance.
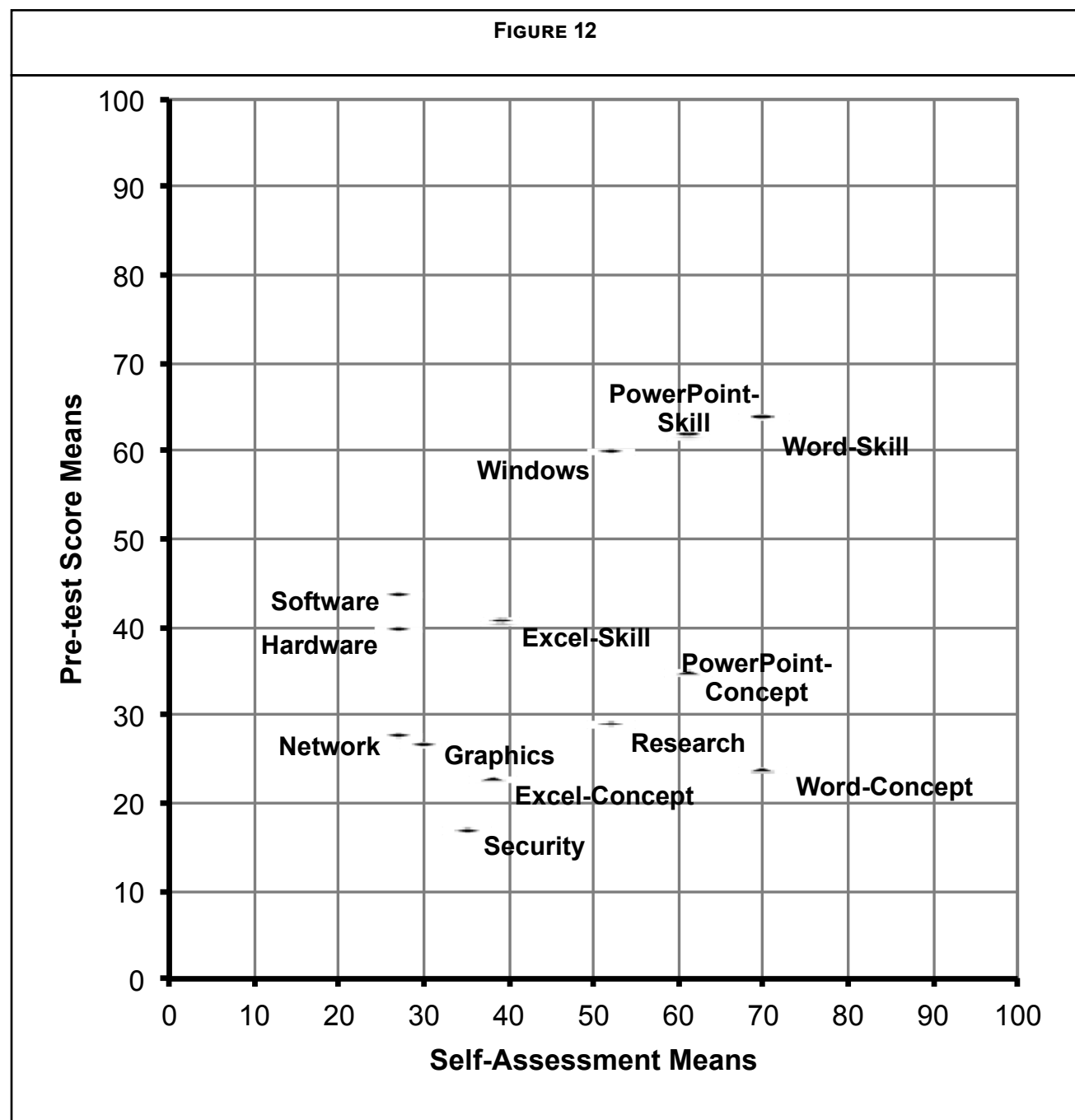
Review of aggregate data indicates some perception of knowledge in this topic. Concept pre-test scores, however, indicate the contrary. At the individual student level, there is no correlation between self-assessment and concept pre-test performance.

DISCUSSION

This research was conducted in a college course setting. This context is both a strength and a weakness for the study. Compared to experiments conducted outside the classroom, students are likely more engaged in the in-class survey and pre-tests integral to course instruction. On the other hand, the pre-tests are designed as part of an in-

structional process and are not be ideal instruments for a research experiment. For example, due to classroom time constraints, each topic had only four questions in the concepts pre-test. More questions per topic would have yielded more accurate and more statistically powerful results.

Another potential limitation to the study is the lack of well-understood standards of expertise in each content area. What did students think "significant knowledge" in these topics meant? Had the instructor provided a list of knowledge and skills inherent in the concept and skill pre-tests, students would likely have made more accurate self-assessments and correlations with pre-test scores would have been higher. However, the vagueness of standards is consistent with the purpose of the research. Proponents of the "digital native" meme present no standards of knowledge, simply attributing vague expertise to an age

FIGURE 12

Google on a frequent basis. Figure 12. Scatterplot of self-assessment and pre-test means.

And—for Windows, PowerPoint skills, and Word skills – they score significantly better in the pre-test than in other topics. As the Research pre-test questions involve a more sophisticated understanding of research processes than simply "googling," the Research pre-test scores were much lower than students' expectations.

It is important to note that pre-test scores for Word, Excel, and PowerPoint concepts are significantly lower than skills scores for those programs. These skills tests are comprised of small tasks and allow three opportunities to complete the question correctly before it is counted as incorrect. In such a trial-and-error testing environment, students can often manipulate the software correctly without understanding the underlying concepts. For example, a student might modify a pivot table in Excel by finding keywords from the question in the Excel ribbon without understanding the nature and use of pivot tables (an Excel concept). While students benefit from the multiple-choice nature of the concepts tests, they are not allowed multiple attempts to complete the question correctly. Thus, both skills and concept pre-tests likely overstate students' topic knowledge.

Finally, it should be noted that aggregate data tells a different story than individual data. Aggregate data, particularly expressed in the histograms of Figures 2 through 11, suggest varying patterns of student expertise among the different course topics. For example, Word and PowerPoint skills pre-test performance histograms look very similar to the self-assessment histograms for those topics while the histograms for Research look very different. There are real world interpretations to aggregate data patterns that are intuitively appealing. However, at the individual student level, data tell but one story – there is almost no correlation between student self-assessments and student pre-test performance. Out of thirteen coefficients of determination, only four are 0.10 or higher (Word skills, Excel skills, PowerPoint skills, and Software concepts) and none of the r2 values reach 0.20. Although the aggregate data tell stories, these stories only emerge at the group level.

SUMMARY

To the extent students in this study represents the "digital native" population, there is little to support the digital native meme. These digital natives do not consider themselves knowledgeable in the standard topics found in college-level technology literacy courses nor are they particularly adept at assessing their own technological expertise.

REFERENCES

Aiken, L. R. (1996). *Rating scales and checklists*. New York: John Wiley & Sons, Inc.

American Library Association. (n.d.). Information literacy competency standards for higher education. Retrieved from http://www.ala.org/acrl/standards/informationliteracycompetency

Bennett, S., Maton, K., & Kervin, L. (2008). The "digital natives" debate: A critical review of the evidence. *British Journal of Educational Technology*, 39(5), 775-786.

Brown, C. C., & Czerniewicz, L. L. (2010). Debunking the "digital native": Beyond digital apartheid, towards digital democracy. *Journal of Computer Assisted Learning*, 26(5), 357-369.

Brumberger, E. (2011). Visual literacy and the digital native: An examination of the millennial learner. *Journal of Visual Literacy*, 30(1), 19-47.

CertiPort. (n.d.). IC3 GS4. Retrieved from http://www.certiport.com/Portal/common/pagelibrary/IC3_Certifications_GS4.html

Helsper, E., & Eynon, R. (2010). Digital natives: Where is the evidence?. *British Educational Research Journal*, 36(3), 503-520.

Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers & Education*, 56(2), 429-440.

National Research Council. (1999). Being fluent with information technology. Washington DC: National Academy Press.

Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065-1078.

O'Neil, M. (April 21, 2014). Confronting the myth of the 'digital native.' Chronicle of Higher Education. Retrieved from http://chronicle.com/article/Confronting-the-Myth-of-the/145949/

Parsons, J., Oja, D. (2011). *Practical computer literacy,* 3rd ed. Boston: Course Technology.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5).

Shaffer, A., Carey, P., Finnegan, K., Pinard, K., Ageloff, R., Adamski, J., ..., Zimmerman, B. (2011). New perspectives on Office 2010: First course. Boston: Course Technology.

cohort. This research requires students in that age cohort to tap into their own vague sense of knowledge in each of these topical areas.

Figure 12 plots the relationship between self-assessment and pre-test scores for each topic's distribution means. Note the marked gaps in plotted points between approximately 40 and 50 on both axes. The only topics students self-assessed above the level of 50 are Windows, Word, PowerPoint, and Research. The pre-test scores were above

50 only for Windows, Word-Skill, and PowerPoint-Skill. The remaining topics are below the 40 on both scales (with a minor exception for the Software pre-test score mean). Student self-assessment for Software, Hardware, Network, and Graphics are at 30 or lower.

These data patterns suggest students self-assess greater expertise in areas where they are active users. They perceive expertise in Windows, PowerPoint, Word and Research because they use Windows, PowerPoint, Word, and

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Metacognition:
Transforming the Learning Experience

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ABSTRACT

A simplistic definition of metacognition is "thinking about thinking." It involves taking time to analyze and delve into the various ways the mind receives and retains information. It is not a new concept but metacognition is evolving as a new word for successful learners. It is stimulating much conversation and excitement in academia as educators strive to enhance learning skills. This paper dissects the concept of metacognition and argues that it could be the new "best" thing in the field of thinking and learning. It discusses the Miles College experience in using metacognition principles to enhance student learning.

EVOLUTION OF METACOGNITION

The concept of metacognition has been around since humans have been able to reflect on their cognitive experience. Cognition or cognitive experiences are mental processes that involve attention, memory, manufacturing and understanding language, learning, reasoning, problem solving, and decision making. The famous ancient Greek philosopher, Plato, is credited for coining the concept of "thinking about your own thinking" in 400 BC. In 1690 John H. Locke, the English philosopher, mentioned the concept of children reflecting on their own thinking process, which is the basis of metacognition. However, the word "metacognition" was made popular by American psychologist John H. Flavell in the 1970's. Metacognition is thinking about thinking, knowing about knowing, or cognition about cognition. Metacognition is to know when, why and how to solve problems; it is a higher-order of thinking that enables understanding. Metacognition is consciousness of one's own learning or rational process; it is having an appreciation for the knowledge that you already have, knowing how and making room for the knowledge you do not have. This evolving concept is like an internal guide that notices when one's comprehension fails or succeeds and why. The concept may seem intimidating initially but we engage in metacognitive activities daily.

Metacognition is very critical in successful learning; as educators it is beneficial to our students to teach them this concept so they know how to allocate their cognitive resources through metacognitive control. Their learning will improve as they take control of their metacognitive capabilities

MILES COLLEGE'S
METACOGNITION EXPERIENCE

The Miles College Metacognition Lab has one singular, simple mission: To teach students very specific, tailored metacognitive strategies that will increase academic success and retention. Around Miles College, the term metacognition is now commonplace and well understood. However, when the Metacognition Lab was initially created two years ago, there was a healthy amount of skepticism and confusion over what metacognition is and how it was supposed to help students succeed.

In the summer of 2011, Administration was inspired to bring metacognition to Miles College after they heard a speaker at the SACSCOC 2011 Summer Institute on "Metacognition: The Key to Student Learning". It is a testament to the Miles College's vision for and commitment to student learning that one of the leading scholars of metacognition was a lecturer at the Miles College Faculty Conference at the beginning of spring 2013. Miles College is at the forefront of the nation's metacognition movement. Miles College is one of the few Colleges and Universities in the United States to have a campus-wide center dedicated to student metacognition.

As the Metacognition Lab was birthed, the most common questions we heard from students and faculty alike were: "What are metacognitive strategies?" and "Why is metacognition essential?"

The Lab took every opportunity to spread the word that our purpose was to teach students activities that would help them become aware of and monitor their learning in order to enable them to better manage their cognitive skills and to determine weaknesses that can be corrected by constructing new cognitive skills.

Thanks to the support of the entire Miles College Administration, the Metacognition Lab was very successful in spreading awareness about our lab and our mission. As noted previously, the guest speaker lectured and gave workshops to train the entire Miles College faculty and staff on the importance of recognizing and utilizing metacognition as a key to unlocking student success. After the conference, we had faculty that had once been critical of the Lab's mission sharing with us that the guest speaker's talks and workshops had energized and encouraged them more than any conference they had ever attended.

So how exactly has the Metacognition Lab helped students? Well, allow us to let our students tell you. When asked how learning about metacognition helped them, this is a sampling of some of the responses we got from our participants:

1. "Slow down on my work"

2. "To concentrate and ask for help if you need it"

3. "Relaxing helps the lessons go easier"

4. "I learned how to use the Cornell Note-Taking Method"

5. "Read the directions before getting started"

6. "How to solve equations and why I got the answer"

7. "Helped me to be more CONFIDENT!!!"

8. "It is a relaxed atmosphere-which makes learning more comfortable"

Since its inception, the Metacognition Lab has seen tremendous student success. In the 2011-2012 academic year, students who participated in the Lab had on average more than a 12% increase in their semester GPA. For students who started with less than a 2.0 GPA, the average increase in their semester GPA was over 40%.

That first year, the Lab started with a staff of two work-study Honor students and one full time coordinator as Academic Coaches. Over the 2011-2012 academic year we worked with 28 students, many of whom were students with very low grade point average and student athletes threatened with ineligibility. We also had two student athletes who were ineligible to participate in athletics (as well as receive any scholarship money) become eligible again for the fall. We even had two students earn a 4.0 GPA for the summer term.

This academic year, 2012/2013, the Metacognition Lab was expanded to include nine handpicked Academic Success Coaches. The Lab now has a staff which includes seven Honor students who are part-time employees, one Honor student volunteer and one full time coordinator. This semester, the Metacognition Lab worked one-on-one with over 240 students. That amounts to about 85% increase in student participation in just one academic school year!

Impressively, despite the amazing increase in students participating, we have seen very similar increases in students' semester GPA's to our first year. In the 2012-2013 academic year, students who participated in the Lab had on average more than an 8% increase in their semester GPA's. For students who started with less than a 2.0 GPA, the average increase in their semester GPA's was over 55%. Additionally, when looking at students new to Miles with no prior GPA who worked with the Lab, we saw that over 68% of them ended the semester with over a 2.0 GPA while 21% of them ended the semester with over a 3.0 GPA.

Under the Lab's strategic system of student contact, the Academic Success Coaches continually monitor and assess the students as well as teach the students to continually monitor and assess themselves. We aim to keep each student's experience with the Lab individualized and flexible. Depending on what a student's needs are, we offer a range of personalized lessons such as understanding strategies to use in order to comprehend college textbooks, understanding the importance of inner dialogue in assisting or impeding self-motivation, and evaluating and understanding learning styles. We complement these metacognitive strategies by then demonstrating how to use these new ideas on the assignments that the student is working on in their classes. Each Academic Coach has one main goal: To convince the students that the power lies in their hands and that they can take control of their minds and their education.

To illustrate with one example of how the Metacognition Lab has changed student lives, with his permission we would like to introduce Miles College student Alfred (name changed for privacy.) Alfred came to us after midterms this spring semester. Alfred unfortunately had a very tumultuous beginning of the semester and came to us with subpar midterm grades. He managed to upset all of his professors and give off the impression that he did not care about his grades. At the time he came to us, Alfred had not bought any of his textbooks and was not really doing any school work outside of class.

The Metacognition Lab Coaches worked together to provide a welcoming, encouraging, and most importantly, consistent environment where Alfred could come and be treated as a scholar. We taught Alfred how to order his textbooks on the website Half.com and how to order older editions that he could afford. Alfred was given workshops on strategies to help him not only read his textbooks, but understand and retain the information by previewing material and asking critical questions about the text in order to stay engaged in the material.

When we first met Alfred, his professors complained that he was frequently missing class and even when he did show up, and he would be conspicuously late. As Alfred began working with the Lab, the Coaches stressed to him the importance of going to class not only on time and every time, but coming to class prepared to participate by reading the material ahead of time and having questions on hand to ask his professor. His attendance improved, his relationships with his professors improved, and he would spend any time not actually in class in the lab.

At the end of the semester, Alfred's D in Biology Lab improved to an A, his F in Crime and Criminality had improved to a C, his D in Speech improved to a B and his F in African American Experience improved to a B. Most astonishing, Alfred now felt like a true scholar in his college community, had built relationships with some of the top Honor students, and believed in his own academic abilities. He is now a model student and is one of the Metacognition Lab's most vociferous recruiters on campus.

As the Metacognition Lab continues to evolve and expand, the services always remain rooted in teaching the student strategies, techniques, and organizational skills that will allow the student to become an independent thinker who is a master learner. We hold true to the old adage: "Give a man a fish and he eats for a day, teach him to fish and he eats for a lifetime". The Metacognition Lab is thankful for the opportunity to empower the students of Miles College on their journey to become lifelong scholars.

CONCLUSION

As the Miles College Metacognition Lab continues to evolve and expand, the services always remain rooted in teaching students strategies, techniques and organizational skills that will allow them to become an independent thinker who is a master of learning. The Metacognition Lab has been beneficial to both the students who completed High School prepared or unprepared for College work. One objective is to statistically close the gap between the Honor students and non-Honor students. Educators can experience greater rewards from unprepared students by establishing higher expectations for them; emphasizing consistent contact, helping students in determining their individual learning style, and by helping students define their own academic success. By meeting students where they are, helping to clarify their academic responsibility and establishing a learning community of scholars, students will embrace their metacognitive skills and increase their academic reward.

REFERENCES

Thinking About Thinking: Metacognition. (2013, May 15). Retrieved May 15, 2013, from Mind Matters : http://www.mindmatters.edu.au/resources_and_downloads/staff_matters/the_thriving_self/useful_information/thinking_about_thinking_metacognition.html

Anderson, J. R. (1976). Language, memory, and thought. Hillsdale, NJ: Anderson , J. R. (1976). Language, memory, and thought. Hillsdale, NJ: Erlbaum.

Bailey, P. (2012, February 27). *Sensing Thinking Behaving*. Retrieved May 15, 2013, from Brain Facts: http://www.brainfacts.org/sensing-thinking-behaving/awareness-and-attention/articles/2012/metacognition/

Dacin, P. A., & Mitchell, A. A. (1986). *Association of Consumer Research*. Retrieved May 18, 2013, from The Measurement of Declarative Knowledge: http://www.acrwebsite.org/search/view-conference-proceedings.aspx?Id=6530

Darling-Hammond, L., Austin, K., Cheung, M., & Martin, D. (n.d.). Session 9 Thinking About Thinking: Metacognition. *The Learning Class Room*, 157-172.

Flavell, J. H. (1979, October). Metacognition and Cognitive Monitoring. *American Psychologist*, 906-911.

Gabriel, K. F. (n.d.). Teaching Unprepared Students. Sterling, VA: Stylus Publishing.

Hartley, D. (2010). *University of Minnesota's Student Writing Guide.* Retrieved May 30, 2013, from University of Minnesota: http://writing.umn.edu/sws/assets/pdf/2010SWG.pdf

Holmes , A. (n.d.). *What Is the Full Meaning of PQ3R?* Retrieved May 30, 2013, from Ehow: http://www.ehow.com/info_8721515_full-meaning-pq3r.html

Jenkins Ph.D., B. (2013, May 15). *Blog: Teaching Metacognition Thinking About Thinking.* Retrieved May 15, 2013, from Scilearn: http://www.scilearn.com/blog/teaching-metacognition-thinking-about-thinking.php

Kolb, A. Y., & Kolb, D. A. (n.d.). *The Learning Way: Metacognitive Aspects of Experiential Learning.* Cleveland: Case Western Reserve University.

Lang, J. M. (2012, January 17). *Metacognition and Student Learning.* Retrieved May 15, 2013, from http://chronicle.com: http://chronicle.com/article/MetacognitionStudent/130327

Livingston, J. A. (1997). *Metacognition: An Overview.* Retrieved May 18, 2013, from Buffalo: http://gse.buffalo.edu/fas/shuell/cep564/metacog.htm

McGuire, P. S. (n.d.). Metacognition: The Key to Improving Student Learning. (pp. 1-57). Louisiana State University.

Metcalfe, J. (n.d.). *Evolution of Metacognition.* Retrieved May 18, 2013, from http://www.columbia.edu/cu/psychology/metcalfe/PDFs/Metcalfe%20EvolMetacog.pdf

Pauk, W. (2001). *How to Study in College 7/e.* Retrieved May 18, 2013, from The Cornell Note-taking System: http://lsc.cornell.edu/LSC_Resources/cornellsystem.pdf

Peirce, W. (2007, November 17). *Metacognition: Study Strategies, Monitoring, and Motivation.* Retrieved May 18, 2013, from Prince George's Community College : http://academic.pg.cc.md.us/~wpeirce/MCCCTR/metacognition.htm

Ross, K. P. (2013, May 15). *News: Ability to 'Think About Thinking' Not Limited Only to Humans According to New Research.* Retrieved May 15, 2013, from GSU.edu: http://www.gsu.edu/news/63957.html

Cash Flow Statement Spreadsheet Modeling Case Using a Prototype System Development Process

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ABSTRACT

U.S. GAAP and IFRS standards both require a cash flow statement that presents operating, investing and financing net cash flows (FASB, FAS 95; 1987; IASB, IAS 7, 1992). Although students are exposed to the cash flow statement in beginning accounting courses and then study the cash flow statement in more depth in intermediate accounting classes, they still have difficulty preparing the cash flow statement. Spreadsheet modeling is a skill that employers believe is a necessity for students to develop for their accounting careers since spreadsheets are used so extensively in the accounting and business world. This case helps students cement their understanding of the cash flow statement preparation and spreadsheet modeling skills. Using a prototype development process, students build a spreadsheet model that efficiently, consistently, and accurately utilizes proper spreadsheet modeling and validation techniques to process inputs of accrual accounting financial statements and other necessary input data into a proper cash flow statement output. The goal is to have a user friendly, robust cash flow statement spreadsheet model that can be generalized to most companies' financial data. A few accounting professionals who are former students who actually completed the assignment provided feedback for the case. The response was that the case was a valuable learning exercise to help them prepare for the profession and should be continued. One of these former students who is now an audit manager in a large local firm stated, "The project was useful and relevant. It was one of the most real life projects I worked on in school."

INTRODUCTION

Both United States Generally Accepted Accounting Principles (GAAP) and International Financial Report Standards (IFRS) require a cash flow statement providing cash flow information for operating, investing, and financing net cash flows that tie to the overall change in cash and cash equivalents on the balance sheet from one year to the next (FASB, FAS 95; 1987; IASB, IAS 7, 1992). Students often struggle to understand the relationship between the cash flow statement and the income statement and balance sheets which are accrual based financial statements. Accounting instructors and professionals typically agree that preparing a cash flow statement is one of the most challenging accounting problems for students to solve as they start their accounting careers. Accounting firms provide standard spreadsheet cash flow statement models to help their staff efficiently and accurately prepare cash flow statements as a part of required financial statement reports. This article explains a cash flow statement spreadsheet model case and feedback from six accounting professionals who completed the case as students. Each of the professionals is currently working or has worked in pub-

lic accounting. The author presented the case material to these former student professionals to help them remember the details of the assignment. The professionals were then asked to respond to several survey questions and to provide comments and suggestions for the cash flow statement spread sheet model case.

The spreadsheet cash flow statement model case explained herein has two objectives. The first objective is to help students learn to prepare the cash flow statement using the balance sheet, statement of earnings, and other necessary data and transactions. The second objective is to help students become proficient with spreadsheets as a tool to automate and solve accounting problems or perform accounting functions in the business workplace.

Spreadsheet modeling can be an excellent learning tool for students to learn the concepts and then apply them to business and accounting problems. Borthick et al. (2006) explain that new professionals might be able to perform specific tasks earlier in their careers if they received explicit training in the knowledge structures germane to the tasks. Providing students a cash flow statement spreadsheet model that uses the knowledge structures germane

to the task should help accelerate the acquisition of expertise and provide increased efficiency and effectiveness in the cash flow statement preparation process. One of the comments of the professionals, a senior staff in a big four firm, stated about the case:

> "The cash flow statement is complex. It is critical that students who pursue an accounting career, especially those seeking a CPA certification, fully obtain a strong understanding of the cash flow statement. The case does a great job breaking down both methods of the cash flow statement as well as the key components to the statements. Further, students must have the ability to apply the understanding to modern software programs. The case requires the student to think critically about the details of the case and apply the knowledge by creating an Excel template."

The rest of the article explains where the cash flow statement spreadsheet model case is placed in the accounting curriculum and what preparation materials are given to students before completing the case. Then the case instructions and data are briefly explained. A grading rubric is provided along with error messages that instructors can use to provide feedback to students. The results of the questions posed to the professionals who completed the case as students are discussed and their comments about the case are presented in the summary, limitations, and variations section.

PLACEMENT OF CASH FLOW STATEMENT SPREADSHEET MODEL CASE IN THE ACCOUNTING CURRICULUM

This cash flow statement spreadsheet model case is an assignment included in an undergraduate accounting information systems course. Before completing the assignment students complete Microsoft Excel™ training and test evaluation for beginning and intermediate features for Excel. In addition students are presented cash flow statement principles in Microsoft Powerpoint™ slides and an mp4 video, even though students already studied cash flow statements twice, once in beginning accounting and once in intermediate accounting. Further, students have been introduced to the system development life cycle (SDLC) and discussed a prototype approach to computer application development using a Powerpoint presentation. The preliminary design and specification report is tied to the systems preliminary design step. At the same time students are completing the cash flow statement assignment, they are also completing the Systems Understanding Aid (Arens, 2012) which has an Excel workbook with a state-

ment of cash flows, income statement, and balance sheet that are produced from values in the ten column year end worksheet. This case and spreadsheet model could also be included in the intermediate accounting course when studying the cash flow statement.

CASE INSTRUCTIONS AND DATA

The case instructions are presented in Appendix 1. The instructions explain that there are three company data sets which are included in Appendix 2. Students prepare the spreadsheet model using a prototype approach (Harrison, 1985). A prototype development approach is appropriate for development of smaller applications. A prototype approach starts with the process of developing the first iteration (first try) of the model. After completing the first model iteration, the model is evaluated with test data. The developer then finds errors or ways that the model is not complete or working as needed with the test data. An improved model of the first iteration is then developed and tested again. The testing includes the first test data and often includes another set of data so that the model can be tested for the ability of the model to handle a variety of situational data. This development and test process may be repeated many times until the desired model is achieved. The prototype approach for this cash flow model includes an iterative process to use formulas for different company situations and help increase accuracy of the model as well as make it more generic and applicable to different company data sets. The students use at least one company situation with the correct cash flow statement so they can have correct feedback for their spreadsheet model for at least one data set. The three company data sets for the iterative prototype models (O'Keefe, Inc. and High Tech Resources) as well as the final company data set to be handed in as the final cash flow statement spreadsheet model (Instaprint Corporation), are given to the students in a PDF file. The last data set (Instaprint Corporation) is to be handed in as a demonstration of the final model and is to be graded for cash flow numbers, as well as for the system requirement listed in the case instructions.

In addition to preparing a cash flow statement spreadsheet model, students are required to write a short preliminary design or specification report. Students are prepared for this report by a class presentation and discussion of the systems development life cycle (SDLC). The design and specification report helps students justify and then specify the business and computer benefits of the template, as well as the inputs, processes and outputs. This design and specification report helps students understand that the inputs required are an income statement, the beginning and ending balance sheet, and some other necessary transaction and accrual details.

Students are also required to develop a model that uses an input section. Any cells, other than labels, outside the input section cannot use typed in values. The sections outside the input section must use a formula, cell reference, lookup, calculation, etc. that changes automatically based on changes in data inputs. Also, the sections outside the input section must have proper protection applied so that the formulas, cell references, lookup, calculations, etc., remain valid for different company situations. Students are also required to present a graph (they can choose any type and any data from the spreadsheet), and provide built in check figures usually using "if statements" to ensure that direct and indirect methods are equal and that overall net cash flows equal the balance sheet change in cash and cash equivalents from the beginning of the year to the end of the year. Students can choose the basic layout such as single versus multiple worksheets, formula versus account/transaction change analysis.

Use of a spreadsheet modeling approach is not limited to teaching cash flow statement principles. The basic concept of modeling whether, in excel or some other way, could be presented as a model itself for applying the technique to other assignments--including assignments outside of accounting courses. Textbooks use assignments at the end of chapters to enhance levels of learning past knowledge and comprehension, to application and analysis as described in Bloom's taxonomy (see Bloom, 1956). A spreadsheet model can be used to take learning not only to the application and analysis levels as would a textbook cash flow statement assignment, but provides students an opportunity to take learning to the synthesis and evaluation levels. Developing a spreadsheet helps students design, create, modify, and combine their knowledge and comprehension of cash flow statement principles into a useful model for future use. Using a prototype development process and requiring students to use particular excel tools to create a model to solve a complex problem such as a cash flow statement, enables students to reach Bloom's highest level of learning by evaluating whether the model has internal validity (accuracy) and external validity (generalizability to other situations.)

GRADING RUBRIC AND FEEDBACK TO STUDENTS

The grading rubric with error messages for student feedback is included in Appendix 3. This grading rubric applies to the Instaprint Corporation. Students hand in the Instaprint Corporation cash flow statement spreadsheet model as their final iteration of the prototype development process. The Instaprint Corporation cash flow statement values are graded for accuracy. Their preliminary design report is also graded. A large part of the grade is

related to model validity, usefulness, user friendliness and how well their model might generalize to different companies. For example, if students' formulas do not change properly when data inputs are changed, then the spreadsheet model score is reduced. Also if it is hard for a user to follow the formulas that process the accrual information into cash flow basis, the student receives fewer points. If a different company is used for the final cash flow statement case, then the specific values to operating (both direct and indirect methods), investing, and financing activities need to be changed to match the correct cash flow statement numbers for that company.

FEEDBACK FROM PROFESSIONALS WHO COMPLETED THE CASE AS A STUDENT

Rather than just use survey questions given to students, the author contacted six supervisor level professionals who completed the case as students. The questions answered by the professionals are shown in Appendix 4. Appendix 4 also shows the summary of the responses. The professionals are currently working in public accounting or have had experience in public accounting with a range of experience from three years to nine years. They include one partner, three manager level (public or industry) and two senior staff accountants. These professionals were contacted personally and agreed to complete the survey.

The professionals answered unanimously that the cash flow statement spreadsheet model assignment should continue to be used both for cash flow statement and spreadsheet modeling purposes. For the question about rating (scale of 1 to 10) the assignment to meet the objective related to learning cash flow principles, three professionals gave a rating of 9 and three gave a rating of 10. For the objective related to learning spreadsheet modeling, one professional gave a rating of 6, another gave a rating of 7, two gave a rating of 9, and two gave a rating of 10. The reasons given for lower rating for spreadsheet modeling stated that the spreadsheet part should include more complex spreadsheet formulas and features such as "vlookup, "sumif statements," etc.

Three of the professionals actually referred to the assignment in their professional career, one of those to help study for the CPA exam. Three of them specifically stated that their firm provided a spreadsheet model to prepare cash flow statements.

SUMMARY, IMPROVEMENTS AND VARIATIONS

Some of the comments from the professionals provide a good summary of the cash flow statement spreadsheet

model case and suggest improvements and variations to the case. One professional stated:

"This case study is a good hands-on project. It is similar to actual cash flow worksheets that I have used in my career. If students can come into the profession with a good working knowledge of cash flow statements, they will be more valuable to the firm or company they work for."

Another former student professional commented:

"This exercise was great in simplifying the cash flows statements. [The assignment] takes something considered to be complex to complete and prepare, then breaks the statement and processing down into pieces that are easy to understand. This assignment really helped solidify the cash flows statement to a point where going into public accounting for the first year I felt confident that I could prepare a cash flow statement."

One of the comments was specific to limitations and improvements related to the spreadsheet objective.

"This was a great project! Keep it up. The only reason I gave a 7 [out of 10] on the financial modeling in Excel is due to the fact that I feel there could be a lot more emphasis put on using some of the more complex formulas like Vlookups and Sumif statements to fill out these statements, as I do now."

As suggested by this professional, instructors can add any other spreadsheet features they want students to learn and apply such as vlookups, conditional formatting, what if analysis, input and output to database and accounting system programs (see Borthick et al., 2013), sorting, subtotals, and macros etc.

Another professional suggested something to improve the objective related to the cash flow statement.

"Overall, I believe this assignment/spreadsheet is useful and functional. I would recommend setting up [the spreadsheet model] a bit differently so students can have a clearer view of the reconciliation of the year-to-year changes in the balance sheet, and where those changes end up on the cash flow statement itself. Also, it may be wise for students to have a clearer understanding of how non-cash transactions affect the cash flow and how those items are reported."

One of the professionals provided the generic cash flow statement spreadsheet model used at his firm. This model, and others used by other firms, could be used as an example for students to use in completing this case in addition to the ones already provided. In addition to using example models obtained from firms, instructors could give students an opportunity to audit the validity of other students' spreadsheet models (see Borthick, 1989). This

spreadsheet model could also be used to help highlight differences between US GAAP and IFRS cash flow statement guidelines (See Grant Thornton, 2012).

REFERENCES

Arens, A.A., D.D. Ward, C.J. Borsum. (2012). *Systems Understanding Aid*. 8th Ed. Armond Dalton Publishers, Inc., Okemos, Michigan.

Bloom, B. S. (1956). Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain. New York: David McKay Co Inc.

Borthick A.F. (1989). Validating Spreadsheets: Minimizing the Potential for Errors. *EDPACS*, 17 (3) 1-8.

Borthick, A.F., M.B. Curtis, and R.S. Sriram. (2006). Accelerating Acquisition of Knowledge Structure to Improve Performance in Internal Control Reviews. *Accounting, Organizations and Society*, 3:323-342.

Borthick, A.F., G.P Schneider, T.R. Viscelli. (2013). Analyzing Transaction Data for Improving Business Management: Bridging the Gap Between Spreadsheet Models and Database Querying. Presented at AIS Educators Conference, July, Laramie WY.

Financial Accounting Standards Board (1987) Statement of Cash Flows: Financial Accounting Standards 95.

Grant Thornton. (2010). *Comparison between U.S. GAAP and International Financial Reporting Standards*. Ed 1.5 (August).

Harrison, R. (1985) Prototyping and the Systems Development Life Cycle. *Journal of Systems Management*, 36, 8, 22-25.

International Accounting Standards Board. (1992) Statement of Cash Flows: IAS 7.

APPENDIX 1
CASH FLOW STATEMENT SPREADSHEET MODEL CASE INSTRUCTIONS

In this project you will apply some of the principles of system design and implementation to develop a useful cash flow statement model using an electronic spreadsheet. You must prepare a preliminary design or specification report that includes:

- General description of the system both in terms of the business problem and the system aspects.

- Identify the objectives, scope and benefits of the system (both in general what the system will do for solving the problem and what features you have or incorporated into your template. Make sure you

describe the benefits of the cash flow statement for business decision makers.

Identify system Requirements:

- Inputs and source of data (Financial statements. Make sure you have a data section in your spreadsheet)

- Processes: (Converting accrual financial data into cash basis)

- Outputs: (Useable, easy to read cash flow statement

You should design the system so that a user could easily follow the computations of how the inputs are converted into the output values. Your spreadsheet model should have an input section in which you can type in the input data. Any cells, other than labels, outside the input section cannot use typed in values. The sections outside the input section must use some type of formula, cell reference, lookup, calculation, etc., that changes automatically based on changes in data inputs. The template should be very user friendly so that formulas are easy to follow rather than just a collection of cell references. Labels should be used to help identify how cash flow statement formulas are used. Since we are using an electronic spreadsheet, the detailed requirements are somewhat built into the system. For example, you really do not need to specify how many digits, etc., there will be in each column.

1. Prepare a prototype computerized cash flow statement spreadsheet model for O'Keefe Inc. and/or High Tech Resources cases found in the cash flow data PDF file. The solutions for these are provided to you so you will have a complete example to help you check your prototype spreadsheet for accuracy. Your template should use formulas as much as possible, so the template can be used for other cases. Your template should include the Balance Sheet for two years (and the changes), the Income Statement, and other details as the inputs. The cash flow statement should include cash flows from operating activities using the direct method and the indirect method (show both), cash flows from investing activities, cash flows from financing activities, schedule of noncash investing and financing activities, and the net increase (decrease) subtotals for each activity area as well as the grand total for net increase or decrease in cash.

Your spreadsheet prototype model should also include a built in way to check whether or not

the indirect and direct methods for cash from operations are equal. You should also have a built in method for checking whether the cash flow total amount is equal to the change in cash and cash equivalents on the balance sheet. Finally your spreadsheet should include some kind of graph and also protection on the cash flow formulas and cash flow statement cells, but not on the data input cells. (It is easiest if you put protection on last.)

2. Once you have prepared the template for O'Keefe Inc. or High Tech Resources, or both, use the template to complete the cash flow statement for Instaprint Corporation (data included in the cash flow data PDF file). If you have made a good template or model from prototype companies' data, completing the Instaprint Corporation problem should not take very long. However expect some fine tuning to some of the formulas.

3. Using the online course system, hand in your work by attaching your Instaprint Corporation cash flow statement spreadsheet model and your preliminary design report files electronically. Name the files with your last name and first initial followed by an underscore and CF for "cash flow."

Assignment Grading		
Points Possible	**Earned**	**Item**
20		Preliminary Design Report
10		Instaprint Corporation Spreadsheet Is it done? Are the numbers correct?
10		Operating Activities (Direct Method)
10		Indirect Method (Reconciliation of Net Income to Cash from operating Activities)
10		Financing and Investing Activities
40		Generalizability to other cases, usefulness, user friendliness, readability of cash flow statement, protection, graph, check figures.
100		Total

APPENDIX 2
CASH FLOW STATEMENT ASSIGNMENT DATA

High Tech Resources

Use High Tech Resources as prototype for developing your Cash Flow Statement Spreadsheet Model

Income Statement 2011 (in thousands)

Sales	352,000
Cost of Goods Sold	(184,000)
Gross Profit	168,000
Operating Expenses:	
Selling	-
Depreciation Expense	(3,500)
Bad Debt Expense	(1,000)
General and Admin	(87,600)
Total	(92,100)
Operating Income	75,900
Other Revenues & Expenses	
Interest Expense	(1,400)
Gain from sale of LT. Inv.	1,000
Loss on sale of Equip.	(500)
Total	(900)
Income Before Income Taxes	75,000
Provision for Income Taxes (34%)	(18,800)
Net Income	56,200

Balance Sheet

	2012	2011	Increase (Decrease)	
Assets				
Current Assets:				
Cash	88,200	29,000	59,200	x
Marketable Securities	-			x
Accounts Receivable (Net)	15,000	13,300	1,700	x
Inventories	10,500	12,700	(2,200)	x
Prepaid Insurance	2,800	2,000	800	x
Interest Receivable	-	-		x
Total Current Assets	116,500	57,000	59,500	
Equipment	40,000	33,000	7,000	x
Less Accumulated Depreciation	(9,500)	(9,000)	(500)	x
Net	30,500	24,000	6,500	
Long Term Investments	3,000	8,400	(5,400)	x
Total Assets	150,000	89,400	60,600	
Liabilities & Equity				
Current Liabilities				
Accounts Payable	3,500	5,600	(2,100)	x
Accrued Liabilities	-	-		
Income Taxes Payable	6,000	4,000	2,000	x
Short Term Notes Payable	-	-		
Unearned Revenue	-	-		
Interest Payable	500	1,000	(500)	x
Total Current Liabilities	10,000	10,600	(600)	
Notes Payable Long-term	8,000	12,000	(4,000)	x
Total Liabilities	18,000	22,600	(4,600)	
Stockholders' Equity				
Common Stock	55,000	50,000	5,000	x
Paid in Capital	16,000	15,000	1,000	x
Retained Earnings	66,000	11,800	54,200	x
Treasury Stock (less)	(5,000)	(10,000)	5,000	x
Total Stockholders Equity	132,000	66,800	65,200	
Total Liabilities and Equity	150,000	89,400	60,600	

Equip Acct			DR	CR
beg equip	33,000			
purchase with stock	6,000			
equip	39,000			
purchase with cash	4500			
Equip disposal	-3500			
End Bal	40,000			
Acum Depre				
Beg	9000			
Deprec exp	3500			
acum deprec disposal	-3000			
Ending Bal	9500			
Jnl entry for disposal of Equip				
cash for equip				-
Equip dispse				3500
acum dep			3000	
loss on equip			500	

Other Details for Cash Flow Statement:

Depreciation Expense	(3,500)
Common Stock Issued for Equipment	6,000
Cash payed on Long-Term Notes Payale	(4,000)
Cash from Sale of Treasury Stock	5,000
Cash Purchase of Equipment	(4,500)
Cash from sale of Long Term Investments	6,400
Proceeds from sale of Equipment	-
Cash Paid for Dividends	(2,000)
Bad Debt Exp Adj	1,000
Cash from Sale of Common Stock	

Cash Received from Customers

Sales	352,000
Add Beg Net A/R	13,300
Less End Net A/R	(15,000)
Less Bad debt exp adj.	(1,000)
Less Beg unearned Rev	-
Add End Unearned Rev	-
Total	349,300

Cash Paid for Inventory

Cost of Goods Sold	184,000
Add End Inventory	10,500
Less Beg Inventory	(12,700)
Equal Purchases	181,800
Add Beg A/P	5,600
Less End A/P	(3,500)
Total	183,900

Cash Paid for Operating Expenses

Operating Exp	92,100
Less Depreciation Exp	(3,500)
Less Beg Prepaid Insurance	(2,000)
Add End Prepaid Insurance	2,800
Add Beg Accrued Liabilities	-
Less End Accrued Liabilities	-
Less Bad Debt Adj.	(1,000)
Total	88,400

Cash Received from Interest

Interest Revenue	-
Add Beg Interest Receivable	-
Less End Interest Receivable	-
Total	-

Cash Paid for Interest

Interest Exp	1,400
Add Beg Interest Payable	1,000
Less End Interest Payable	(500)
Total	1,900

Cash Paid for Income Taxes

Income Tax Exp	18,800
Add Beg Inc. Tax Payable	4,000
Less End Inc. Tax Payable	(6,000)
Total	16,800

Cash Flow Statement

Cash Flows from Operating Activities
Direct Method:

Cash Received from Customers	349,300
Cash Received from Interest	-
Cash Payments for Inventory for Resale	(183,900)
Cash Payments for Operating Expenses	(88,400)
Cash Payments for Interest	(1,900)
Cash Payments for Taxes	(16,800)
Net Cash Provided (Used) by Operating Activities	**58,300**

Cash Flows From Investing Activities:

Cash from sale of Long Term Investment	6,400
Cash from Sale of Equipment	-
Cash Paid for Purchase of Equipment	(4,500)
Net Cash Provided (Used) by Investing Activities	**1,900**

Cash Flows from Financing Activities:

Proceeds (+) or Payment (-) of long term debt	(4,000)
Proceeds(+) or Payment(-) for Treasury Stock	5,000
Payment of Cash Dividends	(2,000)
Net Cash Provided (Used) by Financing Activities	**(1,000)**
Net Increase in Cash and Cash Equivalents	
(Marketable Securities)	**59,200**

Schedule of Noncash Investing and Financing Activities

Issued Common Stock for Equipment	6,000

Cash Flows from Operating Activities
Indirect Method:

Net Income	56,200
Adj. To reconcile NI to net cash	
provided by operating activites:	
Depreciation Expense	3,500
Change in Accounts Receivable	(1,700)
Change in Inventory	2,200
Change in Pre-paid Expenses	(800)
Change in Interest Receivable	-
Change in Accounts Payable	(2,100)
Change in Taxes Payable	2,000
Change in Unearned Revenue	-
Change in Interest Payable	(500)
(Gain) or Loss on sale of LT Inv.	(1,000)
(Gain) or Loss in Sale of Equipment	500
Net Cash Provided (Used) by Operating Activities	**58,300**

Is direct method equal to indirect method?	You got it right baby
Is Net increase in Cash same as change in cash on the comparative balance sheet?	Great Job

---

O'Keefe Inc.
Comparative Income Statements
For the Year Ending December 31, 2012 and 2011
(In Thoursands of Dollars)

Use O'Keefe Inc. as prototype for developing your Cash Flow Statement Spreadsheet Model

	2012	2011
Sales	3,000	2,500
Cost of Goods Sold	(2,600)	(2,300)
Gross Profit	400	200
Operating Expenses:		
Selling	(125)	(105)
General and Administrative	(70)	(60)
Total Operating Expenses	(195)	(165)
Operating Income	205	35
Other Revenues and Expenses:		
Interest Income	10	5
Interest Expense	(40)	(20)
Total	(30)	(15)
Income Before Taxes	175	20
Provision for Income Taxes (34%)	(60)	(7)
Net Income	115	13
Earnings Per Share	1.28	0.19

O'Keefe Inc.
Comparative Balance Sheets
December 31, 2012 and 2011
(In Thoursands of Dollars)

	2012	2011	Increase (Decrease)
Assets:			
Current Assets:			
Cash	300	270	30
Marketable Securities	75	45	30
Accounts Receivable (Net)	325	280	45
Inventories	400	350	50
Interest receivable	60	55	5
Total Current Assets	1,160	1,000	160
Property, plant, and equipment	1,500	1,300	200
less accumulated Depreciation	(800)	(750)	(50)
Net	700	550	150
Other Assets	15	12	3
Total Assets	1,875	1,562	313
Liabilities and Stockholders' Equity			
Current Liabilities:			
Accounts Payable	435	330	105
Income Taxes Payable	45	5	40
Interest Payable	50	45	5
Total Current Liabilities	530	380	150
Long-Term Debt	300	250	50
Total Liabilities	830	630	200
Stockholders' Equity			
Common Stock ($1 par)	90	70	20
Premium on Common Stock	15	10	5
Retained Earnings	940	852	88
Total Stockholers' Equity	1,045	932	113
Total Liabilities and Stockholders' Equity	1,875	1,562	313

Additional Information (In Thoursands of dollars)

Depreciation Expense during 2012	$	50
Dividends declared and paid during 2012	$	27
Common Stock Issued at par for cash in 2012	$	15
Equipment acquired		
Paid cash for equipment	$ 190	
Issued comon stock for equipment	$ 10	
Total Equipment acquired	$	200
Long Term debt paid off in cash	$	20
Issued new Long Term debt for cash	$	70
Loan extended to President of company	$	3
Bad Debt Expense Adjustment	$	-

O'Keefe Inc.
Statement of Cash Flows
For the Year ending December 31, 2012
(In Thoursands of Dollars)

Cash Flows from operating activities		
Net Income		115
Adjustments to reconcile net income		
to net cash provided by operating activities		
Depreciation Expense	$ 50	
Increase in Accounts Receivable	(45)	
Increase in Inventory	(50)	
Increase in Interest Receivable	(5)	
Increase in Accounts Payable	105	
Increase in Income Taxes Payable	40	
Increase in Interest Payable	5	
Total Adjustments		$ 100
Net cash provided (used) by operating activities		215
Cash flow from investing activities		
Payments for purchase of equipment	$ (190)	
Net cash provided (used) by investing activities		$ (190)
Cash flow for financing activities		
Proceeds from issuance of common stock	$ 15	
Proceeds from issuance of long-term debt	$ 70	
Payments on long-term debt	$ (20)	
Payment for loan to President	$ (3)	
Payment of cash dividends	$ (27)	
Net cash provided (used) by financing activities		$ 35
Net increase (decrease) in cash and cash equivalents		60
Cash and Cash Equivalents December 31, 2011		315
Cash and Cash Equivalents December 31, 2012		375
Schedule of noncash Investing and Financing Activities:		
Issue Common Stock in Exchange for Equipment		10

Cash Flow from operating activities (Direct Method)

Cash Received from Customers	2,955
Cash Received from Interest	5
Cash Payments for Inventory	(2,545)
Cash Payments for Operting Expenses	(145)
Cash Payments for Interest	(35)
Cash Payments for Income Taxes	(20)
Net cash provided (used) by operating activities	215

Cash Received from Customers

Sales	3,000
Add Beg Net A/R	280
Less End Net A/R	(325)
Less Bad debt exp adj.	-
Add Beg unearned Rev	
Add End Unearned Rev	
Total	2,955

Cash Paid for Inventory

Cost of Goods Sold	2,600
Add End Inventory	400
Less Beg Inventory	(350)
Equal Purchases	2,650
Add Beg A/P	330
Less End A/P	(435)
Total	2,545

Cash Received from Interest

Interest Revenue	10
Add Beg Interest Receivable	55
Less End Interest Receivable	(60)
Total	5

Cash Paid for Operating Expenses

Operating Exp	195
Less Depreciation Exp	(50)
Less Beg Prepaid Insurance	
Add End Prepaid Insurance	
Add Beg Accrued Liabilities	
Less End Accrued Liabilities	
Less Bad Debt Adj.	-
Total	145

Cash Paid for Interest

Interest Exp	40
Add Beg Interest Payable	45
Less End Interest Payable	(50)
Total	35

Cash Paid for Income Taxes

Income Tax Exp	60
Add Beg Inc. Tax Payable	5
Less End Inc. Tax Payable	(45)
Total	20

Instaprint Corporation
Income Statement
For the Year Ending 2012

Use Instaprint as the Company on your Final Cash Flow Statement Spreadsheet Model

Income Statement	2012
Sales	2,902,000
Cost of goods sold	(1,662,000)
Gross profit	1,240,000
Operating Expenses	(968,000)
Operating income	272,000
Other revenues and expenses:	
Interest income	20,000
Gain on Sale of Land	30,000
Interest expense	(34,000)
Income before income taxes	288,000
Provision for income taxes	(118,000)
Net income	170,000

Instaprint Corporation
Comparative Balance Sheets
December 31, 2012 and 2011

	2012	2011
Assets		
Current Assets:		
Cash	530,000	192,000
Marketable securities	-	-
Accounts receivable (Net)	606,000	578,000
Inventories	792,000	822,000
Interest receivable	-	-
Prepaid expenses	108,000	152,000
Total current assets	2,036,000	1,744,000
Land, buildings, and equipment	1,606,000	1,500,000
Accumulated depreciation	(852,000)	(756,000)
Total fixed assets	754,000	744,000
Patents	100,000	-
Total assests	2,890,000	2,488,000
Liabilities and stockholders' equity		
Liabilities:		
Current Liabilities:		
Accounts payable	342,000	382,000
Income taxes payable	-	-
Interest payable	-	-
Accrued liabilities	112,000	70,000
Short-term notes payable	146,000	200,000
Unearned revenue	-	-
Total current liabilities	600,000	652,000
Long-term debt	248,000	-
Total liabilities	848,000	652,000
Stockholders' equity:		
Common Stock and paid-in capital	410,000	310,000
Retained earnings	1,632,000	1,526,000
Teasury Stock	-	-
Total stockholders' equity	2,042,000	1,836,000
Total liabilities and stockholders' equity	2,890,000	2,488,000

Additional Information

Depreciation Expense for the year	96,000
Cash dividends declared and paid during the year	64,000
Land Acquired ten years ago: Initial Cost	20,000
Land Acquired ten years ago: Sold During the year	50,000
Equipment purchase during the year	126,000
A patent was acquired in exchange of common stock	100,000

APPENDIX 3
CASH FLOW STATEMENT CASE GRADING RUBRIC AND ERROR MESSAGES

Design report errors (20 points)

No Preliminary design report handed in as required by the assignment. -20

Why is a cash flow statement important to a business decision maker? -2

What is the purpose for computerizing the cash flow statement preparation? -2

Missing input, processing, output explanation up to -6

Template validity, usefulness and friendliness and generalizeability (40 points)

You have typed in values where a formula or cell reference should be. (Take off 1 point for each typed in value outside input section)

No built in formula for checking whether indirect method equals the direct method. -4

No built in formula for checking whether total cash flow equals change in cash and cash equivalents during the year on the balance sheet. -4

Your formulas could be more comprehensive so that this template would be useful to a wider range of entities. (take off up to 8 points)

Would be more user friendly if the formulas were properly labeled and documented. -4

No protection set on the appropriate cells in the work sheet. -4

No graph used in the worksheet -4

Direct Method (10 points)

Cash Received from Customers (up to 3 points off)

Cash Received from Interest -1

Cash Paid for Inventories (up to 2 points off)

Cash Paid for Operating Expenses (up to 2 points off)

Cash Paid for Interest -1

Cash Paid for Income Taxes not correct -1

Indirect method (10 points)

Depreciation exp of 96,000 should be added in indirect method -2

Gain on sale of fixed asset should be $30,000 subtracted on indirect method. -1

AR increase of $28,000 should be subtracted on indirect method. -1

Prepaid expenses decrease of $44,000 should be added on indirect method -1

Inventories decrease of $30,000 should be added on indirect method. -1

AP decrease of $40,000 should be subtracted on indirect method. -1

Accrued liabilities increase of $42,000 should be added on indirect method. -1

Investing Section and Financing Sections (20 points)

Missing $50,000 cash in on sale of land in investing section. -4

Missing cash out for $126,000 for purchase of equipment in investing section. -4

Missing long term debt issued for $248,000 in financing section. -4

Missing Cash out from payment of Dividends for $64,000 -4

Sale of patent for stock should be in the schedule of noncash financing and investing activities. -4

APPENDIX 4
QUESTIONS SENT TO FORMER STUDENTS WHO ARE WORKING IN ACCOUNTING PROFESSION

Cash Flow Statement Spreadsheet Model Case

I have attached the assignment instructions in a MS Word™ file, company case data PDF file, cash flow statement concepts Powerpoint file, and an example of a completed cash flow statement spreadsheet model for a specific company

Please answer the questions about the cash flow excel case assignment. The objectives of the assignment are:

1. Help students learn to prepare the cash flow statement using the balance sheet, statement of earnings, and necessary specific transactions
2. Help students become proficient with spreadsheets to help them automate and solve accounting problems or perform accounting functions in the business workplace.

- On a scale of 1 to 10 (10 being the strongest) do you believe this cash flow spreadsheet case meets objective 1? (Average response was 9.5)

- On a scale of 1 to 10 (10 being the strongest) do you believe this cash flow spreadsheet case meets objective 2? (Average response was 8.5)

- Since completing this case in class, have you ever referred to the spreadsheet in any way (i.e. help you with a cash flow statement or help you put together a spreadsheet model or perform a spreadsheet function)?   Yes ___or No ___ (3 Yes and 3 No)

- Should this case continue to be used to help students learn spreadsheet modeling?
  Yes __ or No __   (6 yes)

- Should this case continue to be used to help students learn cash flow statement concepts and application?   Yes __or No __ (6 Yes)

- What type of entity do you work for? (please mark the appropriate entity type)
    o Public accounting ____
    o Industry, Corporation ____
    o Governmental entity ____
    o Other ____

Please write any comments you have about this case (strengths, weaknesses, suggestions).

Building an Academic Culture of Praxis

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ABSTRACT

Facilitation of student learning is arguably the most important action of higher education. The paper focuses on student-centered education, praxis, and assessment in the context of a particular university campus. It considers how colleges can bridge theory and practice with the goal of achieving praxis campus-wide. The paper examines the process undertaken by the campus to holistically apply praxis. It discusses the benefits of a student-centered approach that extend beyond the classroom to include administration and staff. The resulting unified organizational culture can have profound positive effects on the student learning experience and the entire college community.

INTRODUCTION

The scholarship on student-centeredness is primarily focused on individual classroom pedagogy. Grebennikov and Shah (2013) conducted a recent study that delved into the trends in perceived importance and performance of various university services and main issues that a particular university had been addressing to enhance student experience. One of their findings was that it is the total experience of the university that shapes students' judgments, not just what happens in the classroom. As stated by Cahill, Turner, and Barefoot (2010), "higher education managers should ensure that institutional strategies and infrastructures promote the improvement of student learning and the students learning experience" (p. 292). Cullen, Harris, and Hill (2012) also took student-centeredness beyond the classroom and asked academic leaders to consider the broader implications of making their institutions fully learner-centered.

This paper focuses on how higher learning institutions can progressively implement the effectual art of bridging theory and practice with the perpetual aspiration of achieving campus wide praxis. "Ideally, theoretical constructs and real world practice should be closely related" (Williams, Sánchez, & Hunnell, 2011). Praxis denotes doing or action: the exercise or practice of an art, skill, or science (Chapman, 1999). Acquiring content knowledge of a particular field or discipline through higher education alone is not enough. Jarvis (as cited in Chapman,

1999) explained that there is content knowledge and process knowledge. The former concept indicates why and the latter indicates how (Chapman, 1999). The 'learning while doing' approach relies on data and on adjusting the organization's implementation plan and the underlying ways of operating (Kerman, Freundlich, Lee, & Brenner, 2012).

The explanatory analysis of the campus presented in the following manuscript is part of a university that prides itself on being a teaching institution with professional and career orientations. The campus offers its students hands on experiences, with laboratory learning practice embedded in the curriculum. Curriculum is at the heart of what higher education does. To truly effect change, the curriculum needs to be examined and aligned with learner-centered practices (Cullen, Harris, & Hill, 2012). Research shows that students are better able to effectively apply principles when instruction is combined with experiential learning (Grover & Stovall, 2013). The university is committed to experiential education, which continues to serve an integral part of the institution's identity. Through an interdisciplinary approach to learning, the campus in question has sought to build and expand the notion of campus community to develop a culture of praxis wherein theory meets practice within and without the classroom. The concept of praxis challenged the higher education conventions of faculty versus administration, student affairs versus academic affairs, and the master teacher syn-

drome. The master teacher syndrome is the antithesis of instructor lifelong learning; it is the belief that competent teaching is a finite feat that requires no additional development. Progressive pedagogues are contrastingly responsive, flexible, and evolving (Morris, 2013).

This article addresses and extends knowledge in the areas of student-centered education, praxis, and assessment. It reports the results of a university campus that executed a holistic, student-centered initiative that effectively melded academic and professional orientations (i.e., theory and practice). The paper reviews the pedagogical literature pertaining to student-centered learning and praxis. It relates how a particular college campus philosophically and conceptually aligned the academic experience with industry skills. The amalgam is at some level irrelevant, because highly effective instructors in industry and the professions intuitively share both with students. The idea that academic orientations and professional orientations are schismatic is foreign to the instructor that possesses both of these. For instance, a bi-oriented teacher would link site visitations (i.e., field trips) with relevant Essential Learning Competencies (ELCs) such as higher order thinking, critical thinking, analysis, interpretation, and problem solving in a classroom discussion.

Enhancing the Student Experience

In student-centered environments, the student often determines the learning goal, the means to support learning, or both (Hannafin, 2012; as cited in Hannafin, Hill, Land, & Lee, 2014). Despite espousing student- or learner-centered classroom teaching practices, teachers often employ didactic, teacher centered approaches (Polly & Hannafin, 2011; Johnston, 2009). Terms such as student-centered and learner-centered are ubiquitous in contemporary educational discourse. Their pervasiveness causes them to be used casually, which does not often reflect the high level of responsibility and expectation that is placed on the student (O'Neil & McMahon, 2005). The educational process benefits when learners become partners in the teaching process (Hein, 2012) rather than being required to listen to didactic oriented instructors providing lengthy on-ground classroom lectures where the amount of learning is questionable (Henderson, Finkelstein, Beach, & 2010; Fata-Hartley, 2011; Yamarik, 2007). At the broadest level, conditions where students are able to not only provide input, but rather, control and have "greater autonomy" (Hein, 2012, p. 23) over their programs, courses, delivery methods, and matriculation (Gibbs, 1992) of study assumes that students have both the capacity and the maturity to guide themselves or function at a high level. Hains and Smith (2012) discovered that student confidence levels increased because

of a student-developed course. The authors reported that course development process proved to be a catalyst for student development and allowed the students to take further ownership of their education. Hence, a student-centered focus symbiotically relates to or, at the very least, leads to self-directed learning (i.e., autodidacticism). The pursuit of a measured student-centered learning environment can be advantageous while enhancing the student experience (Zuhal, 2012; Wright, 2011; Polly & Hannafin, 2011; Azevedo, Behnagh, Duffy, Harley, & Trevors, 2012; Lewis & Reinders, 2008, as cited in Feuer, Given-King, & Low, 2009). Egle, Navarre, and Nixon, (2011) affirmed the student-centered, discussion-based classroom and its valuing of multiplicity, diversity, opportunity, and democratic process. When a college or university prioritizes and seeks to facilitate the needs of students first, they tend to be more student-centered rather than faculty-centered (Wright, 2011). Ahn and Class (2011) concluded, "Worthwhile benefits can be realized for students and instructors alike within different disciplines through a shift in pedagogy from a traditional teacher-centered to a student-centered approach" (p. 277). This type of prioritizing ensures that services, activities, and resource allocations will directly or indirectly enhance the student experience. Achieving a student-centered learning goal can be an aspiration wherein academic leadership, faculty, and staff can create an environment that fosters a student-centered trajectory. According to Cahill, Turner, and Barefoot (2010, p. 292), "The key to the success of enhancing the student learning experience is the engagement with students at both a faculty and university level."

Sparrow, Sparrow, and Swan (2000), suggested that while there may be limitations to establishing a student-centered learning approach, it is possible and worth the journey. A student-centered approach helps students to develop a "can-do" attitude (Jones, 2007). It is effective, motivating, and enjoyable. Stukalina (2010) regarded student motivation as an essential factor for the educational environment's quality improvement. The journey to pursue a student-centered learning setting requires a concern for how students learn and a mind shift towards grooming students to become self-directed learners (Feurer, 2009). As learners become more adept at monitoring and taking responsibility for their own learning, the use of technological tools becomes more effective (Cullen, Harris, & Hill, 2012). Student learning should be viewed holistically, by examining each element of the learning process. Thus, matching and aligning those elements with an academic experience that is intentionally designed to reach the totality of what constitutes a student becomes likely. The discussion inevitably leads to the underlying goal for academics—developing independent, lifelong, autonomous learners.

U.S. President Bill Clinton once said, "We are living in a world where what you earn is a function of what you can learn" (U.S. Department of Education, 1995, as cited in Ayofe, Ajetola, & Oyewole, 2009, p. 327). To educate students to be prepared for the work force and life, a middle ground between Theory (pure-research based knowledge) and Practice (industry, hands-on knowledge) should exist. Welsh and Dehler (2012) contended "that student-centered learning experiences need to be more firmly grounded in theory and paired with pedagogical strategies that, in combination, result in deep, intentional and integrative learning" (p. 772). Students are often exposed to an almost breathtaking array of curricular and co-curricular learning experiences. The obvious concern is how educators should help them make meaning of their diverse learning. Taylor (2011) suggested pedagogical processes that promote reflection across learning experiences in a student-centered approach to integrate learning. The self-education or autodidactic aspect is essentially a contemplative, absorptive process. Love (2013) argued that what is missing in the discourse on theory-to-practice is the recognition of the role of informal theory that serves as the bridge between formal theory and practice. Informal theories are the theories that individuals carry around in their heads about all aspects of their work. Love (2013) claimed that all professionals develop and use informal theories. Faculty members move pedagogically toward this center from their unique perspectives.

The Student-Centered Campus

The new focus on assessing that the students are actually learning the information offered by the institutions' programs and that students can demonstrate what they have learned is a benefit to all stakeholders (Ashley, Friday-Stroud, & Collins, 2010). As a result, it is no longer enough for administrators and faculty members to claim that "we have taught the students," but they must now demonstrate and confirm that the students have learned the materials taught; hence, promoting the development an assessment culture (Ashley, Friday-Stroud, & Collins, 2010). It is an accepted pedagogical premise that the evaluation methods are determined by the objectives and practices employed, and the extent to which the course objectives are fulfilled (Cornelius & Gordon, 2008, as cited in Wright, 2011). A variety of tools can be used to assess and evaluate different aspects of student-centered teaching and learning. Wright's (2011) research indicated that students tended to respond positively to learner-centered changes that were introduced, and that the teachers considered themselves successful in their quest to create more learner-centered classrooms while achieving their course objectives. Establishing a student-centered learning environment requires incremental steps of preparation to student readiness before beginning college, active learn-

FIGURE 1
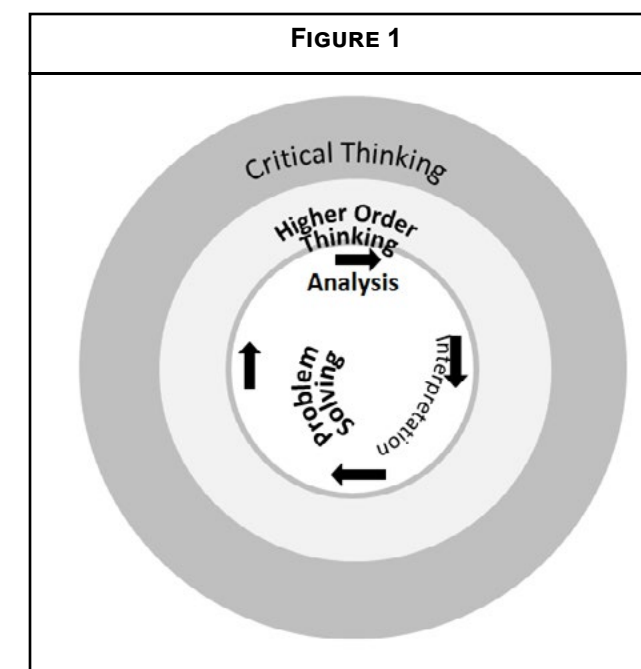
ing at a high level, and student choices. The university campus at hand recognized the requirements and recently employed an alternative strategy of placing emphasis on the student experience to eventually reach an authentic student-centered campus. Figure 1 shows how an entire organizational team can facilitate the student experience strategy in panorama.

Figure 1. The Hickman Model (named after the administrator on campus who created it) is a nonlinear illustration of how ELCs can work concurrently in learning, and an example of how anyone on the team can participate in the process of building Praxis on campus.

Sixty-five percent of college professors report that what is taught in high school does not prepare students for college (Alliance for Excellent Education, 2007). Far too many high school graduates enter college without the basic content knowledge, skills, or habits of mind they need to succeed (Venezia & Jaeger, 2013). The student campus population at the time was nearly one-third white, one-third black, one-third Hispanic, making it rather culturally diverse. In terms of age, the student average was 24 years of age. Considering this, the campus examined how student learning was affected by:

- student learning styles,
- demographics,
- academic achievement before entering college,
- placement scores,
- and study skills.

From each of these contributing factors emerged the need for deliberate and strategic faculty development.

Campus faculty members were reputed for their passion, industry knowledge, and love for students. There was a case for the faculty to be immersed in focused teaching and learning developmental training activities that would address the needs of the students. Connecting the student experience (classroom instruction, faculty interaction, industry preparation) to rigor can occur through deliberate engagement by faculty.

The following four areas of concentration led to giving students a balanced education:

1. Starting at orientation and continuing through their academic career, students were introduced to basic learning competencies, termed Essential Learning Competencies (ELCs): interpretation, analysis, problem solving, critical thinking, and higher order thinking. These competencies are at the core of all campus learning and create sound thought processes from which all future learning takes place.

2. Students received experiential learning components that can be observed and measured within each of their courses. Kolb defined experiential learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience" (as cited in Grover & Stovall, 2013, p. 1). Classroom projects were delivered with depth, breadth, and understanding of all levels of higher order thinking. Co-curricular events and projects also demonstrate a richer format through the integration of the critical thinking: theory meets practice.

3. Wherever possible, an interdisciplinary approach is used to further challenge students to think critically and about all the areas a particular question or situation may influence a decision or outcome. This creates a tool for life-long learning both in the work force and in personal life (Lin & Lee 2013).

4. Through an ongoing teaching and learning initiative sponsored by the university, faculty cohorts designed acceptable minimal standards for writing, oral communication, and information literacy. The specific communication criteria produced ensured that regardless of course, discipline, or college, all faculty members would deliver and expect consistent standards of work.

In direct response to addressing academic rigor, a model for building an academic culture of praxis on the campus was presented to all faculty, deans, and chairs. The model (see Appendix) illustrates a continuum from pure industry, hands-on practice, to pure research-based theory. Theory and practice converge in the middle of the continuum's vectors. This juncture is often referred to as praxis. Praxis is generally understood to be between the theoretical and the practical (Ramsey & Miller, 2003). The goal of this model is to create conditions wherein each faculty member moves pedagogically along the continuum towards praxis. There are five areas of concentration that stem from the campus's journey to a culture of praxis:

1. The ELC Initiative,

2. Experiential Learning & Co-curricular integrative learning components

3. Interdisciplinary Pedagogical approach

4. Writing, Communications, and Information Literacy standards, and

5. Physical Classroom Environment

The ELCs are a shared philosophy for teaching and learning. It is important to note that the type of collaborative process required for such an endeavor is not typically a part of the culture of higher education, which places a premium on individual faculty autonomy (Henderson, Finkelstein, Beach, & 2010). Nevertheless, ELCs help the campus by providing more specific definitions to ensure an appropriate balance between student engagement and rigor. Competent teachers have always calibrated to the low end and vectored to the high side. In this instance, the primary expected outcome of creating the ELC initiative was to encourage faculty and students to overtly specify, identify, articulate, reflect and provide feedback, utilizing specific competencies:

1. interpretation, analysis,

2. problem solving,

3. critical thinking,

4. and higher order thinking.

Policies and practices that enhance student engagement with feedback may build students' sense of responsibility and ownership for their learning (Handley, Price, & Millar, 2011).

There were two areas of focus during the introductory rollout of the teaching and learning initiative. The first was working with faculty to consistently connect the ELCs in all classroom deliveries. The second was getting students to recognize the ELCs when they are being applied. Students were introduced to the ELC program through their college orientations, a 1st year introductory class, meetings with their academic advisors, and through classroom instruction. The ELCs became a talking point that was referenced on screen savers of all student-accessed computer monitors, office tents, and classroom posters. Faculty examined assignments, exams, and projects to ensure that delivery methods emphasized interpretation, analysis, problem solving, critical thinking, and higher order reasoning. A survey sample of 160 students responded to a questionnaire, in which they identified that they understood most of the ELCs. Nonetheless, critical thinking and higher order reasoning was consistently misinterpreted by the students sampled. In response, three faculty members went to a national conference on assessment training. They were trained on delivery and assessment of critical thinking. They subsequently trained ten other faculty members through a formalized teaching and learning initiative.

A random sampling of 200 hundred seniors across colleges were administered a Critical Assessment Test (CAT). The test was developed by Tennessee Technological University and is used by higher education institutions throughout the United States to assess critical thinking intelligence quotient:

> The CAT Instrument is a unique tool designed to assess and promote the improvement of critical thinking and real-world problem solving skills. The instrument is the product of extensive development, testing, and refinement with a broad range of institutions, faculty, and students across the country. (Center for Assessment & Improvement of Learning, 2014)

During a 2-day period, 10 trained faculty members graded the tests. The results would later be used as a baseline to measure student progress during a phased implementation of the ELCs. The campus administered the same assessment instrument in a subsequent term: winter semester 2012-2013. All timeline activities were accomplished during the 2011-2012 academic year.

The other interesting factor that played an essential role in the success of the ELC initiative was the convergence of faculty and administrators attending pedagogical development seminar sessions. By requiring administrators on the campus' academic leadership team (i.e., the chief academic officer, dean's, and chairs) to be in the same teaching sessions as faculty representatives, they too become leading learners. More specifically, administrators were more likely to focus attention on what students are actually doing when they are in class (Brookhart & Moss, 2013),

- see themselves as educators first,

- to have less of an 'us and them' attitude,

- have a bigger stake in the part of their jobs to lead learning,

- understand and have 'buy-in' for academic resources.

In the instance of this specific campus, administrative leaders were to abdicate their position power and have the humility to attend the sessions. Having representatives from both academic factions interacting during the teaching session, getting to know one another in a different setting, and eating lunch together undoubtedly increased their level of understanding and trust of each other. The academic leadership team spent its summer retreat developing next steps to move the ELC initiative into the 2012-2013 Academic Year phased implementation. The program revision was more recently repeated during the 2013-2014 academic year.

During the 2013-2014 academic year, the campus invested in Team-Based Learning (TBL) training. Instructors began to integrate the TBL model into various classrooms. Sweets (as cited in Sibley & Spridonoff, 2014) defined team-based learning:

> A special form of collaborative learning using a specific sequence of individual work, group work and immediate feedback to create a motivational framework in which students increasingly hold each other accountable for coming to class prepared and contributing to discussion. (p. 1)

Michaelsen and Sweets (2008) determined that the benefits to using this model include better classroom attendance, increased pre-class preparation, improved academic performance, and the development of interpersonal and team skills. They concluded that TBL is effective irrespective of academic disciplines or year in study. The TBL model, similar to the flipped classroom model, provides yet another opportunity for an educator to reduce lower-order thinking instruction in the classroom; thereby, foster a higher-order thinking learning environment. The flipped classroom inverts traditional teaching methods, delivering instruction online outside of class and moving 'homework' into the classroom (Knewton, 2014). The traditional group project approach to classroom teaching had emerged as one of the highest student dissatisfiers on the campus. The TBL began to effect change in how students view class projects and collaborative learning assignments.

Experiential Learning & Co-Curricular (Integrative learning). The charge to all campus faculty members was to continue to develop experiential learning components that could be observed and measured within each of their courses. Many remarkable interactive examples emerged that were strengthened through the application of the ELCs. Classroom projects were delivered with much more depth, breadth, and higher order thinking skills. Course and campus-wide co-curricular events and projects also demonstrated a richer format through the integration of the ELCs (e.g., Arts & Sciences Fair, Entrepreneurship Contest, Leadership Cultural Immersion Symposiums, Conference, Management Course Business Simulations, and dramatic interactive plays performed by students taking the Drama Studies course).

Interdisciplinary pedagogical approach.

The academic community began to connect disciplines where possible to encourage instructors to seek out deliberate and meaningful ways to connect relevant disciplines to further challenge students to think critically. For example, Leadership course faculty partnered with Media Relations course faculty. Fashion Merchandise & Retail Marketing faculty partnered with Culinary Arts faculty. Sport Entertainment & Event Management/Marketing faculty partnered with Marketing and Management faculty. This faculty community identified experientially-based projects to foster collaboration. One such project was the development of Cultural Engagement Leadership Conference designed to leverage the campus' diversity through leadership exercises that allowed disciplines to intersect. Other disciplines that joined the partnership included Psychology, English, Math, and Sociology. Additionally, partnerships between the academic affairs and student affairs departments emerged wherein the dean of students began working as an active member of the academic leadership team. Collective and co-curricular experiential learning events were developed. For example, a Stereotype Awareness Week was designed through this collaboration. Such bridges have created a healthy synergy between Academic Affairs and Student Affairs resulting in a more holistic student experience.

Writing, communications, and information literacy (standards through the TLS). Faculty cohorts designed acceptable standards for writing, oral communication, and information literacy. The standards were put in place to ensure that, regardless of course, discipline, or college,

all faculty and students would be held to consistent standards of acceptable work.

Many faculty members incorporated the ELCs into their course syllabi, teaching strategies, and general philosophy on teaching and learning. The faculty members made great progress, and there is still more to learn as the campus embarks upon this charge to make student learning more meaningful and worthwhile. It is also critically important that faculty make a distinction between ELC and student learning outcomes (SLOs) to avoid confusion. To be exact, these ELCs are not SLOs. ELCs are intended to complement SLOs. In the campus examined, ELCs are used as an internal feedback loop to directly address academic rigor. In examining faculty assignments, exams, and projects, faculty and administration looked for the presence of specific competencies like interpretation, analysis, problem solving, critical thinking, and higher order thinking. The ELCs were specifically identified for their role in helping to determine the presence of rigor). The campus's comprehensive assessment of courses and assignments revealed that for the most part, rigor was present. However, it was not clearly articulated or being consistently delivered.

The above initiative does not add or subtract from SLOs for any course. Rather, the effort aims to develop both faculty and students to overtly

- specify,
- identify,
- articulate,
- reflect, and
- provide feedback,

utilizing these specific competencies. It also does not change the learning objectives or content of the courses. The ELC initiative supports the university's long-standing academic culture of providing students with a meaningful and worthwhile academic experience. It helps by providing definitions that are more specific to ensure that there is an appropriate balance between student engagement and rigor. In short, the need for and use of the ELCs are better thought of as a shared philosophy for teaching and learning and as an added assurance of rigor in the classroom. The approach does not supersede or conflict with the university system's outcomes assessment work. It complements the larger outcomes programs that the institution's faculty is implementing. The ELC process described in this article may not only lead to productive instructional changes within a particular department but may also reduce conflict within and without all departments (Henderson, Finkelstein, Beach, & 2010).

CONCLUSIONS

Student-centered, inquiry-rich, and cognitively complex demonstrations and/or activities are sometimes referred to as constructivist methods (Metty, 2013), and were extended beyond the classroom at the campus described above. An initiative that bridged theory and practice led to the campus achieving the goal of facilitating praxis. Five foci guided the campus to reach the organizational culture of praxis. The ELC model described encourages higher order student thinking under the guidance of a facilitating professor. ELCs that represented a shared campus praxis philosophy of teaching and learning led the academic culture to the opportune juncture where academic and professional orientations converge. Faculty members incorporated the ELCs into their classes with great student learning results. Following the ELC Initiative roll-out, many on-campus faculty and staff members were enthusiastically seeking to embed the ELCs into their courses. Organizational culture gives an organization identity (Cheung, Wong, & Wu, 2011) and can determine organizational results (Jacobs, Mannion, Davies, et al., 2013; Asif, 2011; Yilmaz & Ergun, 2008). Universities articulate their identities during moments of organizational change (Macdonald, 2013), particularly when they involve academics and students. Linking academic priorities, like praxis, to a university's culture can be an effective method for creating a learning environment for all constituents—students, faculty, and staff. The process facilitates an atmosphere of 'closing the loop'—where declarations meet reality. University community members can understand, accept, and may even be ignited by their stake in the campus philosophy and how such guiding principles educate students. The preceding article examined how one campus leveraged its university's vision by linking it to its academic priorities. It provided an overview of the progressive steps taken to develop what can be referred to as an academic pipeline for success. The larger expected outcome from the research and case illustration explicitly shows how when bridges are built across academic affairs, student affairs units, and campus environment, the interconnectedness among these units can have profound positive effects on the student learning experience. Empirically measuring the extent of such influences is the next step for future research.

Hence, the above article provides support for practitioner efforts to apply theoretical developmental constructs to industry-related programs, and augments the organizational behavior literature, so that effective tactics and strategies can be applied to the implementation of developmentally focused on-campus programs. Higher education instructors and administrators alike would serve their campuses well if more learning and teaching "on the

fly" collaborations and serendipitous discovery were encouraged, rather than corralling learners (Morris, 2013), in ways targeted to focused problems and broader social concerns (Welsh & Dehler, 2012) using an integrative discipline, which connects and integrates useful knowledge from a variety of disciplines.

REFERENCES

Ahn, R., & Class, M. (2011). Student-centered pedagogy: co-construction of knowledge through student-generated midterm exams. *International Journal of Teaching and Learning in Higher Education, 23*(2), 269-281. Retrieved from http://files.eric.ed.gov/fulltext/EJ946152.pdf

Alliance for Excellent Education. (2007, September 12). High School Teaching for the Twenty-first Century: Preparing Students for College. [Report/Fact Sheet]. Retrieved from http://all4ed.org/wp-content/uploads/HSTeach21st.pdf

Asif, F. (2011). Estimating the impact of Denison's (1996), "What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars. *Journal of Business Research, Volume 64*(5) 454-459. Retrieved from http://www.sciencedirect.com/science/article/pii/S0148296310000706

Ashley, C., Friday-Stroud, S., & Collins, J. (2010). A systems approach to creating and sustaining an assessment culture. *International Journal of Education Research, 5*(2), 152-167. Retrieved from http://go.galegroup.com/ps/i.do?id=GALE%7CA299759819&v=2.1&u=gale15690&it=r&p=AONE&sw=w&asid=7f159e2add649566ea52285db40a09bd

Ayofe, A. N., Ajetola, A. R., & Oyewole, A. S. (2009). Assessment of existing gap between industrial IT skill requirements and computer science curriculum in tertiary institutions. *The Pacific Journal of Science and Technology, 10*(2), 326-336. Retrieved from http://www.akamaiuniversity.us/PJST10_2_326.pdf

Azevedo, R., Behnagh, R. F., Duffy, M., Harley, J. M., & Trevors, G. (2012). Metacognition and self-regulated learning in student-centered leaning environments. In D. Jonassen & S. Land (Eds.), *Theoretical foundations of student-centered learning environments* (pp. 171-197). Retrieved from http://books.google.com/books?hl=en&lr=&id=3oOpAgAAQBAJ&oi=fnd&pg=PA171&dq=student-centered&ots=9ldudbBFa8&sig=9EgpzcIN2nBS3A7id-IXSCC3KdU#v=onepage&q=student-centered&f=false

Brookhart, S. M., & Moss, C. M. (2013). Leading by learning: When principals immerse themselves in learning about formative assessments and how students learn, they become better instructional leaders for teachers. *Phi Delta Kappa, 94*(8), 13-17.

Cahill, J., Turner, J., & Barefoot, H. (2010). Enhancing the student learning experience: The perspective of academic staff. *Educational Research, 52*(3), 283-295. doi: 10.1080/00131881.2010.504063

Center for Assessment & Improvement of Learning. (2014). Critical thinking assessment test. Tennessee Technological University, Cookeville, TN. Retrieved from http://www.tntech.edu/cat/home/

Chapman, B. S. (1999). Praxis: An adult education practicum. *Adult Learning, 11*(1), 14-17.

Cheung, S. O., Wong, P. S. P., & Wu, A. W. Y. (2011). Towards an organizational culture framework in construction. *International Journal of Project Management, 29*(1), 33-44.

Cullen, R., Harris, M., & Hill, R. R. (2012). *The learner-centered curriculum: Design and implementation.* Hoboken, NJ: John Wiley & Sons.

Egle, L., Navarre, E., & Nixon, C. (2011). Breaking the rules of discussion: Examples of rethinking the student-centered classroom. *Human Architecture: Journal of the Sociology of Self-Knowledge, 9*(3), 1-14. Retrieved from http://go.galegroup.com/ps/i.do?id=GALE%7CA276353164&v=2.1&u=gale15690&it=r&p=AONE&sw=w&asid=621a460e39392384356f7a0ccac8c7ab

Estes, C. (2004). Promoting student-centred learning in experiential education. *Journal of Experiential Education, 27*(2), 141-161.

Fata-Hartley, C. (2011). Resisting rote: the importance of active learning for all course learning bjectives. *Journal of College Science Teaching, 40*(3), 36-39. Retrieved from Gale Power Search.

Feuer, L., Given-King, E. J., & Low, C. (2009). Using student-centered methods with teacher-centered students. [Review of the book *Using student-centered methods with teacher- centered students*, by M. Lewis & H. Reinders]. *TESL Canada Journal, 27*(1), 115-120. Retrieved from http://www.teslcanadajournal.ca/index.php/tesl/article/viewFile/1036/855.

Furman, G. C. (2012). Social justice leadership as praxis: Developing capacities through preparation programs. *Educational Administration Quarterly, 48*(2), 191-229.

Gibbs, G. (1992). *Assessing more students.* Oxford, England: Oxford Brookes University.

Gibbs, G., & Simpson, C. (2004). Conditions under which assessment supports students' learning. *Journal of Learning and Teaching in Higher Education 1*(2004-2005), 3-31.

Grebennikov, L., & Shah, M. (2013). Monitoring trends in student satisfaction. *Tertiary Education and Management, 19*(4), 301-322. doi:10.1080/13583883.2013.804114

Grover, K., & Stovall, S. (2013). Student-centered teaching through experiential learning and its assessment. *NACTA Journal, 57*(2), 86-87. Retrieved from Academic OneFile database.

Hains B., & Smith, B. (2012). Student-centered course design: Empowering students to become self-directed learners. *Journal Of Experiential Education, 35*(2), 357-374. doi:10.5193/JEE35.2.357

Handley, K., Price, M., & Millar, J. (2011). Beyond 'doing time': Investigating the concept of student engagement with feedback. *Oxford Review Of Education, 37*(4), 543-560. doi:10.1080/03054985.2011.604951

Hannafin, M. J., Hill, J. R., Land, S. M., & Lee, E. (2014). Student-centered, open learning nvironments: Research, theory, and practice. In *Handbook of Research on Educational Communications and Technology* (pp. 641-651). New York, NY: Springer.

Hansson, S. (2007). Praxis relevance in science. *Foundations of Science, 12*(2), 139-154.

Hardy, I. J. (2010). Teacher talk: Flexible delivery and academics' praxis in an Australian university. *International Journal for Academic Development, 15*(20), 131-142.

Hein, S. (2012). The learner-centered classroom: A case for applying learner focused strategies in the hospitality classroom. *Consortium Journal of Hospitality & Tourism Management, 17*(2), 27-39. Retrieved from Academic OneFile.

Henderson, C., Finkelstein, N., & Beach, A. (2010). Beyond dissemination in college science teaching: An introduction to four core change strategies. *Journal of College Science Teaching, 39*(5), 18-28. Retrieved from Gale Power Search.

Jacobs, R., Mannion, R., Davies, H. T. O., Harrison, S., Konteh, F., & Walshe, K. (2013). The relationship between organizational culture and performance in acute hospitals. *Social Science & Medicine, 76*, 115-125. Retrieved from http://www.sciencedirect.com/science/article/pii/S0277953612007368

Johnston, J. S. (2009). *Deweyan inquiry: From education theory to practice.* Albany, NY: Suny. Jones, L. (2007).

The student-centered classroom. Cambridge, MA: Cambridge Press.

Jones, R. D. (2009). *Student engagement teacher handbook.* Rexford, NY: International Center for Leadership in Education.

Kerman, B., Freundlich, M., Lee, J. M., Brenner, E. (2012). Learning while doing in the human services: Becoming a learning organization through organizational change. *Administration in Social Work, 2012, 36*(3), 234-257.

Knewton. (2014). The flipped classroom infographic: A new method of teaching is turning the traditional classroom on its head. Retrieved from http://www.knewton.com/flipped-classroom/

Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant teaching. *Theory Into Practice, 34*, 159-165.

Lin, Y. -M., & Lee, P. -C. (2013). The practice of business's teacher teaching: Perspective from critical thinking. *International Journal of Business and Commerce, 2*(6), 52-58. Retrieved from Academic OneFile database.

Love, P. (2012). Informal theory: The ignored link in theory-to-practice. *Journal of College Student Development, 53*(2), 177-191. Retrieved from Project MUSE database.

Macdonald, G. P. (2013). Theorizing university identity development: Multiple perspectives and common goals. *Higher Education, 65*(2), 153-166.

Macintyre L., M., & Kim, J. -H. (2010) Narrative inquiry invites professional development: Educators claim the creative space of praxis. *The Journal of Educational Research, 103* (2), 137-148.

Metty, J. (2013). The color of blood. *Journal of College Science Teaching, 42*(5), 8-10. Retrieved from http://digital.nsta.org/publication/index .php?i=154555&m=&l=&p=4&pre=&ver=flex

Michaelsen, L., & Sweet. M. (2008, June). Team-based learning. *The Advocate 25*(6), 5. Retrieved from http://cit.duke.edu/wp-content/uploads/2012/11/AcademeTBL.pdf

Morris, S. M. (2013, May 15). A manifesto for community colleges, lifelong learning, and autodidacts. *Hybrid Pedagogy.* Retrieved from http://www.hybridpedagogy.com/journal/a-manifesto-for-community-colleges-lifelong-learning-and-autodidacts/

O'Neill, G., & McMahon, T. (2005). Student-centered learning: What does it mean for students and lecturers? In Emerging Issues in the Practice of University

Learning and Teaching. (pp. 27-36). Dublin, Ireland: AISHE.

Partridge, W. L. (2008) Praxis and power. *Journal of Community Psychology, 36*(2), 161-172.

Polly, D., & Hannafin, M. J. (2011). Examining how learner-centered professional development influences teachers' espoused and enacted practices. *Journal of Educational Research, 104*(2), 120-130. doi:10.1080/00220671003636737

Ramsey, R. E., Miller, D. J. (2003). *Experiences between philosophy and communication: Engaging the philosophical contributions of Calvin O. Schrag.* Albany, NY: SUNY Press.

Sibley, J., & Spridonoff, S. (2014). *Introduction to team-based learning.* Team-based Learning Collaborative. Centre for Instructional Support. Faculty of Applied Science. The University of British Columbia, Vancouver, Canada. Retrieved from http://www .team-basedlearning.org/Resources/Documents/TBL%20Handout%20Aug%2016-print%20ready%20no%20branding.pdf

Smith, M. K. (1999, 2011). What is praxis? In *The Encyclopedia of Informal Education.* Retrieved from http://www.infed.org/biblio/b-praxis.htm

Sparrow, L., Sparrow, H., & Swan, P. (2000). Student centred learning: Is it possible? In A. Herrmann and M. M. Kulski (Eds), Flexible Futures in Tertiary Teaching. Proceedings of the 9th Annual Teaching Learning Forum, 2-4 February 2000. Perth, Australia: Curtin University of Technology. Retrieved from https://otl.curtin.edu.au/events/conferences/tlf/tlf2000/sparrow.html

Stukalina, Y. (2010). Using quality management procedures in education: Managing the learners' centered educational environment [Abstract]. *Technological and Economic Development of Economy, 16*(1), 75-93.

Taylor, S. H. (2011). Engendering habits of mind and heart through integrative learning. *About Campus, 16*(5), 13-20. doi:10.1002/abc.20076

Venezia, A., & Jaeger, L. (2013). Transitions from high school to college. *The Future of Children, 23*(1), 117-136. Retrieved from http://www.jstor.org/stable/23409491

Wakefield, S. E. L. (2007). Reflective action in the academy: Exploring praxis in critical geography using a "food movement" case study. *Antipode, 39*(2), 331-354. doi:10.1111/j.1467-8330.2007.00524.x

Welsh, M. A., & Dehler, G. E. (2012). Combining critical reflection and design thinking to develop integrative learners. *Journal of Management Education, 37*(6) 771–802. doi:10.1177/1052562912470107

Wilkinson, J., Olin, A., Lund, T., Ahlberg, A., & Nyvaller, M. (2010). Leading praxis: Exploringeducational leadership through the lens of practice architectures. *Pedagogy, Culture & Society, 18*(1), 67-80. doi:10.1080/14681360903556855

Williams, T. T., Sánchez, B., & Hunnell, J. (2011). Aligning theory with practice: Understanding school–family partnerships at an inner-city high school. *Children and Youth Services Review, 33*(5), 689-697. doi:10.1016/j.childyouth.2010.11.012

Wright, G. B. (2011). Student-centered learning in higher education. *International Journal of Teaching and Learning in Higher Education , 23*(3), 92-97. Retrieved from http://www.isetl.org/ijtlhe/pdf/IJTLHE834.pdf

Yamarik, S. (2007). Does cooperative learning improve student learning outcomes? *The Journal of Economic Education*, *38*(3), 259-277. Retrieved from Gale Power Search.

Yilmaz, C., & Ergun, E. (2008). Organizational culture and firm effectiveness: An examination of relative effects of culture traits and the balanced culture hypothesis in an emerging economy. *Journal of World Business, 43*(3), 290-306. Retrieved from http://www.sciencedirect.com/science/article/pii/S1090951608000126

APPENDIX
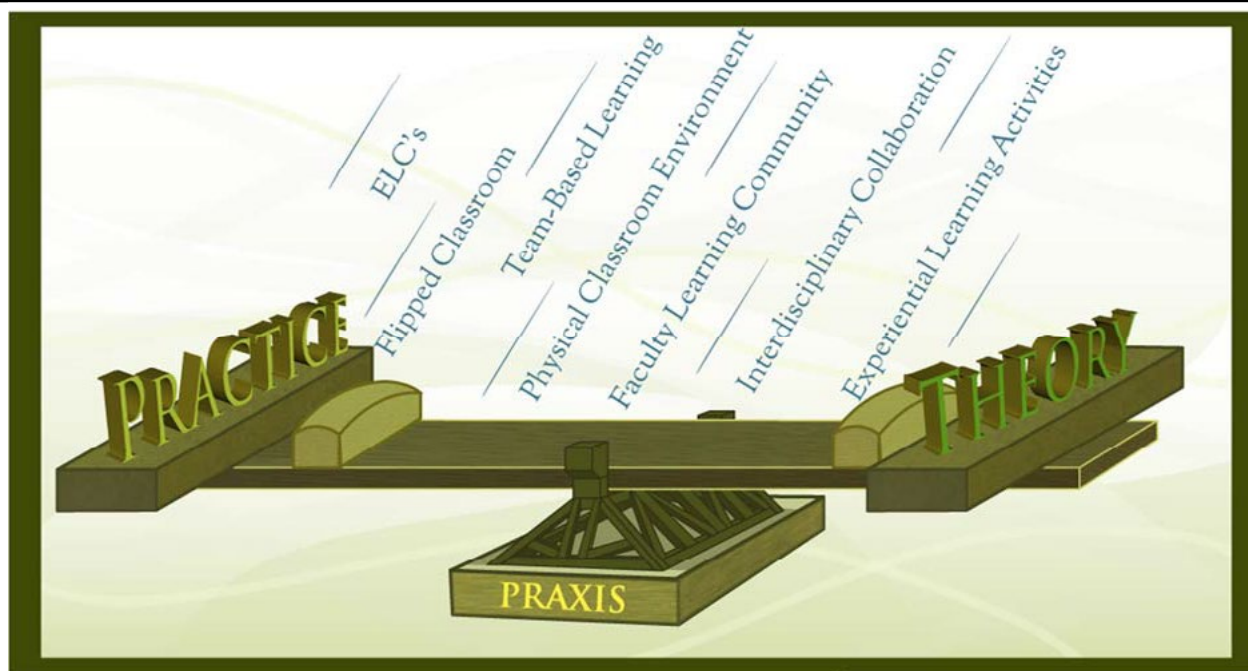
Note. The background shows progressive classroom elements that can be used toward moving toward praxis. The order and positioning of their appearance does not represent any particular sequence or hierarchy.

International Conference on Learning and Administration in Higher Education (ICLAHE.org)

All too often learning takes a back seat to discipline related research. The International Conference on Learning and Administration in Higher Education seeks to focus exclusively on all aspects of learning and administration in higher education. We wish to bring together, a wide variety of individuals from all countries and all disciplines, for the purpose of exchanging experiences, ideas, and research findings in the processes involved in learning and administration in the academic environment of higher education.

We encourage the submission of manuscripts, presentation outlines, and abstracts in either of the following areas:

Learning

We encourage the submission of manuscripts pertaining to pedagogical topics. We believe that much of the learning process is not discipline specific and that we can all benefit from looking at research and practices outside our own discipline. The ideal submission would take a general focus on learning rather than a discipline-specific perspective. For example, instead of focusing on "Motivating Students in Group Projects in Marketing Management", you might broaden the perspective to "Motivating Students in Group Projects in Upper Division Courses" or simply "Motivating Students in Group Projects" The objective here is to share your work with the larger audience.

Academic Administration

We encourage the submission of manuscripts pertaining to the administration of academic units in colleges and universities. We believe that many of the challenges facing academic departments are not discipline specific and that learning how different departments address these challenges will be beneficial. The ideal paper would provide information that many administrators would find useful, regardless of their own disciplines

Academic Business World International Conference (ABWIC.org)

The aim of Academic Business World is to promote inclusiveness by offering a forum for the discussion of research in early stages a search that may differ from 'traditional' paradigms. We wish our to have a reputation for providing a peer-reviewed venue that is full range of researchers in business as well as reference disciplines social sciences.

Business Disciplines

We encourage the submission of manuscripts, presentation outli stracts pertaining to any business or related discipline topic. We all disciplines are interrelated and that looking at our disciplines a relate to each other is preferable to focusing only on our individ knowledge'. The ideal presentation would cross discipline. border more relevant than a topic only of interest to a small subset of a pline. Of course, single domain topics are needed as well.

Conferences

Academic Business World (ABW) sponsors an annual internatio ence for the exchange of research ideas and practices within the business disciplines. The aim of each Academic Business World is to provide a forum for the discussion of research within busines ence disciplines in the social sciences. A secondary but important the conference is to encourage the cross pollination of disciplines together professors, from multiple countries and disciplines, for so tellectual interaction.