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TIME COMPRESSED DELIVERY FOR QUANTITATIVE COLLEGE COURSES: THE KEY TO STUDENT SUCCESS

Randy J. Anderson, California State University, Fresno
Timothy I. Anderson, University High School, Fresno

ABSTRACT

Shrinking university budgets are dictating a greater sense of accountability for college classes. Due to space limitations and required performance markers, students no longer have the luxury of unlimited opportunities to repeat classes ad infinitum when failing in previous attempts. This is especially true in the case of quantitative courses. However, it is not just the students who are feeling the pressure to perform successfully in the classroom. College instructors are being "gently urged" (more aptly describe as a "directive" from their administrators) to help all students progress toward graduation on a strict but reasonable timetable. It is for these aforementioned reasons that innovative teaching techniques are now being investigated by both administrators and instructors. One such approach to teaching inferential statistics at the Craig School of Business, California State University, Fresno, was first investigated during the 2007 summer session, with very promising results on an ad hoc basis. To test the efficacy of a different time rearrangement format, students were exposed to the same amount of course material covered in a traditional semester setting but at almost twice the time length of a normal summer session course per class period (still equaling the time spent in a traditional 15 week semester setting). The class was completed in two-thirds of the time (equivalent to 10 weeks). The class average on the comprehensive final exam for this extended time format showed significantly improved results when compared to the historical data (collected from an exam which has been essentially unchanged for the past 30 years, protected from becoming a public domain entity, and faithfully administered every semester). Furthermore, this success was also exemplified in the final letter grade distribution. There were many more "A"s and "B"s than expected.

This past summer session (2011) provided another excellent opportunity to test a different innovative approach: a time compressed (accelerated) delivery format. As in the summer of 2007, the same amount of course material covered in a regular semester was taught to the students at an accelerated pace, without adjusting the class time (95 minutes), sacrificing almost 3½ weeks of face to face time. The entire course was covered in what would be equivalent to less than 12 weeks of a regular 15 week semester course. The results of this time compression approach demonstrated that when students are forced to focus on quantitative subjects in a concentrated environment (or be lost along the way), a greater effort is forthcoming. Their effort resulted in significantly higher scores, even when compared to the summer 2007 outcomes. The highest ever class average on the comprehensive final exam and

the best ever grade distribution for this instructor were realized through the students' dedication and determination. Although not totally conclusive, there is a very strong positive correlation that students can perform at a higher level of achievement, even in quantitative courses, IF and WHEN they are expected to do so. Moreover, innovative classroom instruction can produce remarkable results. It could be further hypothesized that the traditional 15 week semester, consisting of three 50 minute classes, which allows a student to attempt 18 plus units should be supplanted by an untraditional six week concentrated offering, consisting of 95 minute classes four times a week, limiting a student to a maximum of nine units per term attempted.

DO WE PRACTICE WHAT WE PREACH? MECHANISM DESIGN AS A SOLUTION TO THE PATH DEPENDENT BEHAVIOR OF UNIVERSITY POLICY

Richard S. Brown, Temple University

ABSTRACT

University departments suffer from issues relating to Path Dependence which inhibit the use of mechanisms that allow efficient operations. While Management scholars teach future managers about efficiencies, the units under which they are employed often do not follow their own guidelines. This paper puts forth a clear problem statement which includes four specific issues in Business Schools: 1) the lack of clear institutional or departmental goals, 2) the tenure system, 3) the disparity between full-time and part-time faculty compensation and 4) the "One Size Fits All" model of tenured faculty. Following this, I posit that Mechanism Design can help to resolve these issues. Finally, I offer a specific mechanism design that business departments can utilize to reduce path dependent behavior and which will induce ex ante truth-telling by potential faculty.

STUDENT ACCEPTANCE AND USE OF E-READER TECHNOLOGY AND E-BOOKS AS AN ALTERNATIVE TO TEXTBOOKS

Randy Brown, University of Mary Hardin-Baylor

ABSTRACT

E-readers and e-books have been growing in popularity for the past few years and the last year has seen an explosion of new e-readers and e-books. Many textbooks are now being offered in electronic format, raising the question of their acceptability and use by students. This paper is an introduction to a study investigating college students' acceptance of e-books and e-readers as a viable alternative to traditional paper textbooks.

INTRODUCTION

Electronic books (e-books) have been around for several years and have become more and more popular as alternatives to traditional paper books. There are several large providers of e-books (e.g. Amazon.com, Barnes and Noble, Borders Books, etc.) utilizing a variety of encoding methods. In many cases, the e-books are proprietary and were designed to be read using specific devices. For instance, e-books from Amazon.com can be read using the Amazon Kindle, books from Barnes and Noble can be read with the Barnes and Noble Nook, and Borders e-books can be read by the Borders Kobo. The popularity of e-books has been driven by their lower cost (in many cases), their instant availability, and the ability to carry multiple books on a single device. There are many other reasons people are drawn to e-books over paper books.

One of the downsides to e-readers is the need for another electronic device. In today's world, we are already inundated with electronics – do we really need another just to read books? Many people already have one or more mobile devices and didn't want to have to carry another. This led to the development of portable applications (apps) that could be loaded on various mobile devices to allow the e-books to be read on alternative platforms. For instance, Amazon Kindle now has apps for computers, iPods, iPads, and Androids, allowing Amazon e-books to be readable on those devices. Other e-book providers have similar apps.

Initially, e-book publishers seemed to be targeting pleasure readers, but they now have their sights set on college students, providing many textbooks in e-textbook versions. Many of these e-textbooks cost less than their paper contemporaries, making them more affordable and, thus, more attractive to many college students. But, are students willing to let go of their paper textbooks in favor of e-textbooks? That is the focus question for this study. The rest of this paper looks at the background literature on e-books and e-readers in higher education and details a research approach for attempting to find an answer to the question of whether college students would actually accept and use e-textbooks over paper textbooks.

LITERATURE REVIEW

Even though e-books have been around for several years, research, especially academic research, is somewhat limited as e-books and e-reader technology started out somewhat slow. Recently, however, the popularity of e-books and e-readers has exploded. The numbers and quality of e-books has grown dramatically, and the number of e-readers and e-reader capable devices has also exploded. Wikipedia, for example, has a chart comparing more than seventy e-readers, and admits that that is not all of them. In addition, the list does not include e-reader capable devices such as iPads, iPods, smart phones, tablets, computers, etc. Unfortunately, academic research has not kept pace, and what literature is out there presents conflicting information.

There are literally hundreds of thousands of e-books available, but most of these are leisure books, not textbooks. E-textbooks are on the rise as many vendors try to capitalize on the popularity of e-books. But do students WANT e-textbooks? Research seems to be somewhat mixed, but seems to lean toward answering "No". Several studies indicate that students prefer real textbooks to e-textbooks (Gregory, 2008; McCullough, 2005). Other studies show the preference depends on a variety of demographics such as age and sex (Lewis, 2008). Some studies suggest much of the resistance to e-textbooks is the incompatibilities between the different e-book formats (Aaltonen, Mannonen, Nieminen, & Nieminen, 2011) and the limitations about sharing, lending, and selling e-books. Another suggests some ways to reduce that resistance (Rowlands, Nicholas, Jamali, & Huntington, 2007).

There have been a few studies investigating how students use e-readers, not just whether they would use them for textbooks. Some found students are receptive to the use of e-readers, but only for leisure purposes (Foasberg, 2011; Mallett, 2010). Several have focused on the increasing popularity of libraries and their lending of e-books (Bhatt, 2006; Croft & Davis, 2010; Hernon, Hopper, Leach, Saunders, & Jane, 2007).

Only a few of the studies really seemed to focus on why students would or would not accept e-textbooks as an alternative to paper texts (Kang, Wang, & Lin, 2009; Lam, Shun Leung, Lam, & McNaught, 2009; Shrimplin, Revelle, Hurst, & Messner, 2011). All of the studies seem to have inconclusive results. Perhaps there is a better model to follow.

E-readers are electronic devices and fall under the category of technology. The Technology Acceptance Model (TAM) (Davis, 1989) and its extension using the Theory of Planned Behavior (TPB) (Venkatesh, Morris, Davis, & Davis, 2003) have been used extensively in the last twenty years to evaluate technology and its acceptance . Many of these studies involve student acceptance of technology in the classroom (El-Gayar, Moran, & Hawkes, 2011; Sung Youl, 2009; Un Jan & Contreras, 2011; Xiaoyu & Yuan, 2011).

Another widely used model for evaluating the usefulness of technology is the Task Technology Fit model (TTF), which examines whether an effective tool is being used for a given task (Goodhue & Thompson, 1995). Like the TAM, the TTF has had many applications to higher education (T. McGill, Klobas, & Renzi, 2011; T. J. McGill & Hobbs, 2008; Raven, Le, & Park, 2010).

RESEARCH METHODOLOGY

In an attempt to determine whether students are willing to utilize e-readers in the classroom, we first want to establish a baseline knowledge level about the technology. It is expected that some students will have no experience of knowledge of e-reader technology while others will be quite proficient, having used it for many years.

The first step in our research then, is to develop a survey to find out students' knowledge and experience with e-readers and e-books. The survey targets general knowledge about e-readers and based on the experience level indicated may ask further questions about what e-readers the students have used, why they like/dislike certain e-readers, etc. This should give us a good solid starting point for the next phase of the study.

Step two in the study is to select a cross-section of students from a variety of colleges across a single university (future studies could broaden this to multiple universities across the country or around the world) to field test a variety of e-reader devices. The students would be selected pseudo-randomly, with attempts to make sure all colleges were represented (if possible) and to make sure the selected students were those with little or no knowledge about e-readers. We want students without experience to try to reduce any preconceived bias toward one technology or another.

Once the students have been selected, they will rotate through a variety of e-reader devices including: Kindle, Kindle DX, Nook, Nook Color, Kobo Touch, Sony Pocket Reader, Velocity Micro Cruz, Apple iPad, Apple iPod (or iPhone), and a variety of other tablets. The devices range in screen size from about 3 inches to over 10 inches. Some have color screens, others are black and white. Some are touch screen some are not. Hopefully, this will give us a good range of responses for usability, likability, intent to continue to use, and a variety of other questions based on the TAM, TTF, and TPB models.

T he students will be given the devices in random order to remove sequential bias and will use each device for one week. At the end of a week, the students will evaluate each device based on ease of use, usability, intent to use, and other factors such as screen size, versatility (i.e. how many different e-book versions supported), battery life, touch vs. non-touch, color vs. non-color, etc. After the students have test-driven several devices, a follow-up survey will be utilized to capture their new levels of expertise and intent to use e-readers in the future.

T he data captured from this study should be usable for many different applications and should give us a better idea of how students perceive e-reader technology and whether they might actually be willing to use them.

CONCLUSIONS

Obviously, this study is in preliminary stages. It is hoped that the information presented will engender an interest in more detailed focus on e-readers and e-textbooks for higher educational purposes. It is possible the study will help publishers and e-reader developers to produce technology and books more appropriate for higher education – even if the results indicate students want to use the e-textbooks (there is always room for improvement). There are

many other directions research could take from here. Right now, we have almost a clean slate for doing research in this area. The author intends to extend the research beyond the current study and in different directions.

The primary limitation to this study is a lack of funding to provide more e-readers to allow more students to participate. It is also limited to a single university. The background literature was researched using only online tools (i.e. EBSCO), so only journals in the EBSCO databases were utilized.

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DEVELOPMENT AND VALIDATION OF PROFICIENCY TEST FOR UNDERGRADUATE STUDENTS

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ABSTRACT

The expected output of the study is a computerized proficiency test for the third year college students whose major is Information Technology. It covered the ten major IT subjects taken by the students in the first and second years of their course. The subjects integrated in the computerized proficiency test were: Introduction to Information and Communications Technology, Program Logic Formulation with Programming 1, Word processing, Spreadsheet, Computer Organization and Architecture, Operating System, Graphics Presentation and HTML, Data Communication and Networking, Database Programming, and Basic Electronics and PC Troubleshooting. The written exams constructed by the IT professors/instructors, syllabi, internet websites, computer books, and system software were the bases of test contents.

The researchers developed a valid computerized proficiency test that will be able to quantify the proficiency of the college students in terms of information technology. Specifically, it sought to determine the index of validity of the computerized proficiency test for the IT college students and to measure if there a significant difference in the level of proficiency of the respondents with respect to the above-mentioned skills in terms of sex, academic performance in English and academic performance in Mathematics.

Findings showed that the students' performance in English and Mathematics are contributory to their proficiency in the computerized test. The academic performance in English and Mathematics has bearing in their proficiency in the computerized test. Information Technology curriculum involves programming subjects. Programming subjects involve mathematical operations; therefore, IT course requires proficiency in Mathematics. Also, to be able to comprehend the construction of the problem in computer, proficiency in English is also needed.

Keywords: Development and Validation, Proficiency test, Information Technology and Programming Subjects.

BECOMING SELFLESS: A GROUNDED THEORY OF BEING A LASALLIAN PARTNER

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Rodiel C. Ferrer, De La Salle University

ABSTRACT

While many Lasallians are aware that the Lasallian Mission was in the arena of education, the majority had difficulty though in articulating and expressing that shared mission in terms of a clear and coherent conceptual framework of "what being a Lasallian partner is". An evolved grounded theory was designed to find out what the seed of Shared Mission is on being a Lasallian Partner. Eighty-seven participants representing different stakeholders ranging from students to administrators to Brothers were interviewed over a period of almost 2 years.

Interviews were analyzed using the constant comparison method, and theoretical pacing was also applied. "Becoming Selfless" was the central concern that emerged. Five main processes have been identified and explained that comprise an emerging substantive theory of "Becoming Selfless". The multi-distinct yet related processes are: 1) sensitizing organizational career, 2)contextualizing the process being a Lasallian partner, 3) carrying-forward the mission as stewards of Christ, 4) cultivating the educator within as servant-leaders, and 5) asserting the claim of becoming selfless. The study revealed that the multi-distinct yet related processes could serve as a grounded typology in which stakeholders gain a better hold of how they live, grasp, and deal with what it means to become selfless as partners. The theory proposes that stakeholders can be classified as kernel seeds, hard-coated seeds and moisture-soaked seeds according to their actual lived experiences in being Lasallians. It also proposes that "becoming selfless" goes beyond the stakeholders' profession and work. Likewise, the theory speculates that certain predisposing factors such as self-identity, passion, and commitment of the stakeholders could have an influence in the multi-distinct processes of "becoming selfless". Overall, the present study makes it easier to bridge the gap of discourse between academic gurus, sociologists, policy-makers, scholars and practitioners concerning the stakeholders' understanding and sensitivity to organizational career.

INTEGRATING ICT INTO HIGHER EDUCATION AT THE UNIVERSITY OF MONCTON: A STUDY OF ONSITE VS ONLINE STUDENTS' PERCEPTIONS

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Jean-Pierre Booto Ekionea, University of Moncton

ABSTRACT

For the past two decades, information and communication technologies (ICT) have transformed the ways professors teach and students learn. This study aims to investigate the perceptions of onsite students (blended mode) and of those taking the same courses on the Internet (online mode). To guide the study, a moderator-type theoretical research model was developed, out of which eight hypotheses were formulated. The model was tested in a field experiment. To collect data, we used a multimethod approach, that is, a Web survey involving open- and closed-ended questions. The sample was formed of 192 onsite and online students from the three campuses of the University of Moncton (Moncton, Edmundston, and Shippagan). The quantitative data analysis was performed using a structural equation modeling software, that is, Partial Least Squares (PLS); the qualitative data were analyzed following a thematic structure using QSR NVivo software. In this paper we present a summary of the quantitative results (closed-ended questions) supported and enriched by the qualitative results of the students (open-ended questions).

INTRODUCTION

For the past two decades information and communication technologies (ICT) have transformed the ways professors teach and students learn. Some professors have actively shifted the information flow from a face-to-face mode (student listening, onsite presence) to an entirely online mode (student reading, onsite non presence); that is, they have designed courses and curricula offered completely online using the Internet and the Web. Others have developed the hybrid or blended mode (a combination of face-to-face and online activities; less student onsite presence, ongoing use of ICT both inside and outside the classroom). Hence, knowledge acquisition and dissemination have been re-conceptualized, and new methods developed in order to satisfy the rapidly evolving needs of a population of individuals in search of more knowledge, heterogeneous, and geographically distributed.

In today's global economy, organizations (including universities) who want to survive and strive to stay highly competitive must continually innovate at the human, material, and technological levels. Alavi and Leidner (2001) pointed out that, during the past decade, universities and corporate training facilities have at an increasing rate invested into ICT to improve education and training. Marshall (2002) added that actual classrooms are more and more enriched by

technology. Recent studies by the National Center for Education Statistics (Waits & Lewis, 2003), the Sloan Consortium (Allen & Seaman, 2004, 2005, 2006, 2007, 2008, 2009, 2010), Aggarwal and Legon (2006), Borstorff and Lowe (2007), Martz and Shepherd (2007), Kinuthia and Dagada (2008), as well as Washburn (2011) showed a growing appeal and acceptance of online learning. Other recent studies by Kim and Bonk (2006), Gomez et al. (2007), Eynon (2008), Young and Ku (2008), Steele (2008), Moskal and Dziuban (2011), and the Garrison and Vaughan's (2008) book showed the growth of blended learning. Further, it is argued by Giddens (1999) that one of the more important functions of the university is to allow people to play a significant role in today's new economy. Thus, universities, faculties, and professors are currently looking for ways to improve teaching and curricula, as well as develop new modes capable of satisfying the actual and future needs of organizations and societies. Out of their recursive attempts, the four fundamental questions often revisited are the following: (1) What are we teaching? (2) What should we be teaching? (3) What is the best way to teach it (pedagogy)? and (4) What are the impacts on students?

The study described in this paper aims at helping universities to stay highly competitive in the current global shift in higher education, an approach that is innovative in its exploration of new directions as regards the last two above-mentioned questions. We examine the relation between students' learning outcomes (undergraduate and graduate students) and learning environments integrating ICT. Specific relations between student onsite presence and student online presence are examined as to identify their effect on the basic relation between learning environments and students' learning outcomes. More particularly, this study compares onsite technology-rich hybrid or blended learning environments and online learning environments. Moreover, this study brings to the foreground several moderator variables related to students' characteristics (psychology) and professors' pedagogy in order to better understand the relation between learning environments and students' learning outcomes.

Building on questions 3 and 4 raised previously (professor's pedagogy and impacts on students), this study focuses on the following three research questions: (1) Are there differences between learning outcomes of onsite students and of those taking the same courses online? If so, which ones? (2) Do students' characteristics influence the relation between learning environments and students' learning outcomes, and are there differences in this influence between onsite and online students? If so, which ones? and (3) Does professors' pedagogy influence the relation between learning environments and students' learning outcomes, and are there differences in this influence between onsite and online students? If so, which ones?

This paper describing the study builds on a framework suggested by Fillion (2004) in the conduct of hypothetico-deductive scientific research in organizational sciences, and it is structured as follows. First, the theoretical background supporting the study is examined; second, the methodology followed to conduct the study is presented; and finally, the results of the study are reported and discussed.

THEORETICAL BACKGROUND

This study is theoretically-based on Leidner and Jarvenpaa's, and Phipps and Merisotis' key research works. On the basis of three case studies, Leidner and Jarvenpaa (1993) developed a theoretical research model for other researchers to test in future studies. And, in a literature review, Leidner and Jarvenpaa (1995) inventoried numerous educational variables to be examined in future studies according to different scenarios using ICT. Several of the variables suggested by these authors are used in this study.

In their literature review on distance learning effectiveness in the 1990's, Phipps and Merisotis (1999) pointed out that the studies comparing the distance ICT-based learning environments with conventional learning environments (face-to-face without ICT use) fall into three categories: (1) students' results (performance); (2) students' attitude toward learning in these two types of environments; and (3) students' general satisfaction. We use the last two categories (learning effectiveness and satisfaction) as dependent variables in this study.

Of the 8,110 papers published over a period of 15 years in the journals and reviews examined, Chin et al. (2003) found only 74 that contained moderator variables. Moreover, several IS dominant theories (e.g., Davis' 1989 Technology Acceptance Model (TAM) and Doll and Torkzadeh's 1991 user participation/involvement model; quoted in Chin et al., 2003, p. 192) as well as the streams of research that have extended these models (e.g., Barki et al., 2007; Bhattacherjee & Sanford, 2006; Brown et al., 2010; Carswell & Venkatesh, 2002; Chin et al., 2008; Davis & Venkatesh, 2004; Devaraj et al., 2008; Hartwick & Barki, 1994; Karahanna et al., 2006; Limayem et al., 2007; Morris & Venkatesh, 2010; Venkatesh & Davis, 2000; Venkatesh & Speier, 1999; Venkatesh & Speier, 2000; Venkatesh & Johnson, 2002; Venkatesh et al., 2003; Venkatesh et al., 2008) suggest that moderator variables are an important avenue of future development. Furthermore, numerous researchers within the IS field have suggested that models using moderator variables be tested (Anderson, 1985, Doll & Torkzadeh, 1989, Ives & Olson, 1984, McKeen et al., 1994, Sambamurthy & Zmud, 1999, Tait & Vessey, 1988; quoted in Chin et al., 2003, p. 192; Barki et al., 2007; Brown et al., 2010) as have researchers in other fields (Chin et al., 2003). Hence, most of the variables identified by Leidner and Jarvenpaa (1993, 1995) are used as moderator variables in this study. The resulting theoretical research model is shown in Figure 1.

Figure 1 shows that the theoretical research model which guides the study is articulated around an independent construct, learning environments, a dependent construct, student learning outcomes, as well as two moderator constructs, student characteristics and professor pedagogy. On the basis of this theoretical research model, eight research hypotheses are formulated

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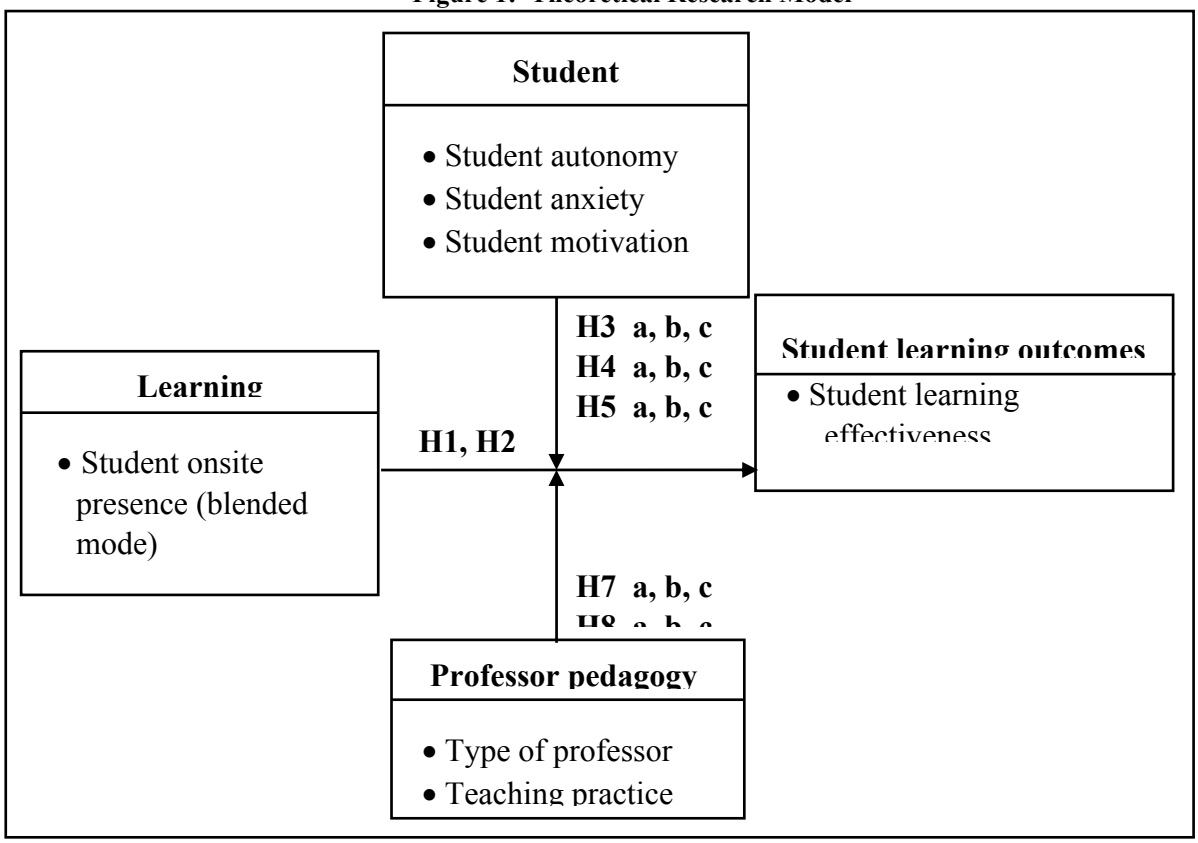
H1: Students whose onsite presence is required to take courses (blended mode) find learning more effective than those whose onsite presence is not required (online mode).

H2: Students whose onsite presence is required to take courses (blended mode) are more satisfied than those whose onsite presence is not required (online mode).

Figure 1: Theoretical Research Model



H3: Students' autonomy has an influence on the relation between learning environments (students' onsite presence and non presence) and their learning outcomes ((a) learning effectiveness; and (b) satisfaction), and (c) this influence is more pronounced for students whose onsite presence is not required.

H4: Students' anxiety has an influence on the relation between learning environments (students' onsite presence and non presence) and their learning outcomes ((a) learning effectiveness; and (b) satisfaction), and (c) this influence is more pronounced for students whose onsite presence is not required.

H5: Students' motivation has an influence on the relation between learning environments (students' onsite presence and non presence) and their learning outcomes ((a) learning effectiveness; and (b) satisfaction), and (c) this influence is more pronounced for students whose onsite presence is not required.

H6: Students' participation has an influence on the relation between learning environments (students' onsite presence and non presence) and their learning outcomes ((a) learning effectiveness; and (b) satisfaction), and (c) this influence is more pronounced for students whose onsite presence is not required.

H7: Type of professor has an influence on the relation between learning environments (students' onsite presence and non presence) and students' learning outcomes ((a)

learning effectiveness; and (b) satisfaction), and (c) this influence is more pronounced for students whose onsite presence is required.

H8: Teaching practice has an influence on the relation between learning environments (students' onsite presence and non presence) and students' learning outcomes ((a) learning effectiveness; and (b) satisfaction), and (c) this influence is more pronounced for students whose onsite presence is required.

In the next section of the paper, we describe the methodology followed to conduct the study.

METHODOLOGY

For a matter of space, we present only the sample and data collection here.
The other sub-sections of the methodology are presented in the full paper.

Sample and Data Collection

The theoretical research model depicted in Figure 1 was tested in a field experiment at a small Canadian university, the University of Moncton. The sample was formed of students of eight undergraduate and seven graduate courses, which were offered at the three campuses of the university (Moncton, Edmundston, and Shippagan) in the two modes taken into account in this study: blended mode and online mode. Students were not randomly assigned, that is, for each course selected, the students were asked to participate in the study. The study was spread over two semesters: winter and fall. Each course had to meet the four following criteria: (1) to use a similar set of ICT in the two modes (computer, e-mail, chat, discussion forum, Web browser, Internet-based software, videoconferencing system, etc.); (2) to be taught by a different professor in the two modes; (3) to have the same course content in the two modes; and (4) to have, as much as possible, a similar group size in the two modes. In addition, each course was selected so that groups of students in the two modes were the most homogeneous possible in terms of age and ICT experience. Finally, the course selection was made in order to cover a large area of administration disciplines. Thus, the sample of the study consisted of 192 students, 105 (42 in winter and 63 in fall) in blended mode courses and 87 (34 in winter and 53 in fall) in online mode courses.

Three weeks before the end of each semester of the data collection, students were asked to fill out an electronic survey on a Web site. To that end, an e-mail, including a URL and a password allowing access to the electronic survey, was sent to students. As follow up, ten days after the students had been asked to fill out the survey on the Web site, an e-mail was sent to students relating the importance of the study for the advancement of scientific knowledge on integration of ICT into higher education. Finally, a few days later, all professors were asked to relay the importance of the study to students during class or in the discussion forums of the online courses.

In the winter semester, 76 students (42, blended mode; 34, online mode) out of 392 completed the electronic survey for a response rate of 19.5%; in the fall semester, 116 students (63, blended mode; 53, online mode) out of 508 completed the electronic survey for a response rate of 22.9%. Overall, 192 students (105, blended mode; 87, online mode) out of 900 completed

the electronic survey on the Web site for a global response rate of 21.3%. And, of these 192 students, 174 (98, blended mode; 76, online mode) completed the qualitative section (open-ended questions) of the Web survey for a response rate of 90.6%.

The results of the study are presented in the full paper.

References are available upon request.

THE IMPACT OF CAREER AND PERSONAL "LIFE TRIGGERS" ON ADULT GRADUATE STUDENTS

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ABSTRACT

The present study examines the impact of "life triggers" (personal and career events that we hypothesize have a significant impact decision making) on nontraditional, adult graduate students to determine if these triggers are a significant predictor of a decision to seek a graduate degree, and/or a significant predictor of the program of study pursued. We survey 407 students enrolled in either a master of business administration, master of healthcare administration, master of science in leadership or a combination program offered by a Southern university over multiple campuses encompassing the major metropolitan areas of the state. The findings in our study are consistent with previous findings from research in the discipline, indicating that the majority of adult graduate students are driven to enroll in a graduate program after experiencing the impact of one or more of these life triggers. Somewhat counter-intuitively, analysis of the data using multinomial logistic regression indicates that the presences of specific life triggers are not a strong predictor of the type of masters program of study chosen. Our findings are useful to academicians and educational professionals who are interested in understanding what drives students to seek a graduate degree, why they seek a graduate degree, and how to develop, implement and improve curricula to appeal to students with these motivational orientations.

D

EVELOPMENTAL AND EVALUATIVE CONTEXTUAL USAGE OF PEER ASSESSMENT OF RESEARCH PRESENTATIONS IN A GRADUATE TAX ACCOUNTING COURSE

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ABSTRACT

Prior research has found mixed results on the utility of peer assessment as either a proxy for instructor grading or a means of providing ungraded feedback to peers. This study examined the correlation between peer-assessed and instructor-assessed research presentations in a graduate federal income taxation class over several semesters. Using identical criteria articulated in a grading rubric, both peer and instructor assessments were used to determine grades on the research presentations and to provide feedback to the presenters. The study found that although student-assigned grades were significantly higher than instructor-assigned grades both overall and across criteria, the student- and instructor-assigned grades tended to move in the same direction across students and criteria. These results suggest that peer assessment may not be suitable as a proxy for instructor grading but may be useful in providing ungraded feedback.

Keywords: peer assessment, higher education, verbal presentations, taxation

A CAMPUS-BASED ALTERNATIVE TO THE MBA INTERNATIONAL TRIP: TEACHING GLOBAL BUSINESS ISSUES AT HOME

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ABSTRACT

Trends over the past several decades point to the need for managers to be more knowledgeable concerning global business issues. Citing that need and the inability of some students to participate in a required international travel experience during their program led to the development of the multi-weekend, on-campus course, Issues in Global Management. The course draws from multiple areas of business in a global environment. It does so through the use of case studies, problems, discussions, and a simulation game highlighting international themes, locations and cultures. The rationale, benefits (to multiple constituencies), and course design are presented and discussed as a basis for discussion by faculty and administrators on campuses with a similar need.

INTRODUCTION

A required part of many institutions' MBA programs is an international component. Traditionally, in our university's part-time MBA program, this has been fulfilled with a faculty led, two-week overseas trip as part of a six credit hour course. Blending onsite classroom instruction, business and manufacturing plant visits, cultural experiences, and learning assignments or consulting with local firms, student groups have traveled to Managua, Nicaragua; Perm, Russia; Madrid, Spain; and Paris, France. Post-travel student evaluations have been almost universally positive. The trips have been rated as significant experiences in the students' educational development. Written comments and verbal feedback by students focus on the breadth of experiences as well as the interactions with people, institutions, and cultures different from their own.

The issue of being absent for an extended period of time from work-related obligations, however, has been problematic for some of our part-time graduate student population. In addition, student or family health issues and child or parental care responsibilities affect many students (as well as some faculty members) in the traditional MBA age group. Therefore, faculty decided to develop an alternative experience to the overseas trip – one that strives to fulfill the same learning objectives, but in a more manageable structure for students with these issues.

In designing the on-campus course the faculty decided to address a perceived weakness of many MBA programs, namely that they do not give students the opportunity to develop the knowledge, skills, and abilities they must acquire to succeed in the business world (Kleiman and Kass, 2007). Further, it was felt the activities of the course must be linked to specific learning objectives (Whetten, 2007) while taking advantage of the synergies that come from cross-department perspectives (Gilinsky and Robison, 2008). A central focus on a team-based simulation experience offered, among other benefits, a strong base from which to produce high involvement, serve as a surrogate for real world experience, and deliver high educational value (Li, Greenberg, and Nicholls, 2007).

Learning objectives and outcomes for the new course mirror those for the international trip experience and draw on several AACSB-related themes (Olian et al., 2002) that involve students acquiring the required skills of management; the capacity to adapt and innovate; and learning about global themes, locations, and cultures. Stated course learning objectives include:
Students will be able to adapt domestic-based theories and constructs in order to successfully manage in a global business environment.

Students will innovate as they manage a consumer product brand introduction in a foreign culture.

Students will continue developing and refining crucial management skills involving decision-making, interpersonal communications, and report writing.

To accomplish these objectives over a compressed time frame, teaching pedagogy takes on an even more significant role. Two principle methodologies, lecture/discussion and a team-based simulation game, are employed to accomplish these learning objectives in part because of their efficiency in using class time as well as the high level interaction and problem solving that they foster. Language taken from the course syllabus presents these pedagogies for the students, in part to establish the course culture:

Lecture/Discussion: The discussion and sharing of knowledge, experiences, opinions and ideas sharpens analytical skills, improves judgment, and enhances conceptual skills. Assigned readings and cases will be covered in class to varying degrees. In some instances the basic concepts and theories will be addressed in detail while in others additional examples, applications, and extensions of the material will be presented or solicited. Students will be actively involved.

Team-Based Simulation Game: Any classroom-based course is by its very nature artificial to some degree. Nevertheless, experience in making decisions is valuable, even when the consequences are not the same as they would be in the so-called "real world." Therefore, each student will participate as part of a team in running a company expanding into Latin America. It is hoped that through this experience students will gain practical experience to apply in the future and allow for the integration of discipline specific material in a problem-solving environment.

BACKGROUND

Many if not most courses in business programs tend to focus on a single discipline or area within a discipline (e.g. financial accounting, corporate finance, marketing research, strategic management). In some programs topics have been combined for specialized purposes, even making use of team-teaching with faculty from different disciplines – whether within business areas (e.g. financial marketing) or through involvement of non-business faculty (e.g. pharmaceutical sales, management of technology, business ethics and law). The course initiative discussed here seeks to take a further step – to blend skill development related to hands-on management in an international setting, with substantive theoretical and applied content from a number of disciplines. The result is a three weekend (i.e. nine, 3½ hour sessions) course designed for those students without the ability to take the significant time off (either due to professional or personal responsibilities) that an overseas trip entails.

Benefits

Offering this course design generates benefits for students, faculty, the institution as a whole, employers, and alumni. Beyond the previously mentioned flexibility it provides to students with unique needs:

The course addresses an expressed concern by alumni and employers that graduates need to be better prepared for a diverse and international workforce, and international customers.

The educational materials used result in a lower cost to students (or to the school if materials are provided as part of tuition) when compared to the subsidized nature of many overseas delivery approaches.

The course is highly flexible – individual readings and cases can be replaced as needed or as they become dated when compared to the use of books or other long-form materials.

In terms of managing the institution's human resources, it allows faculty to participate in the program that otherwise are unable or unwilling to travel overseas in a mentoring or chaperoning capacity.

Incremental student insurance, health care, and liability issues for the institution are eliminated with on-campus delivery of the course. Of particular concern are the misadventures of some students who view their overseas location as an opportunity to engage in a variety of risky or otherwise unsanctioned behaviors.

Potential Transferability to Other Institutions

Ultimately, the MBA curriculum and decision whether to require an international travel component are dependent on the mission and goals of individual institutions. The value of including international content in some fashion however is not in doubt. Due to the wide ranging importance of these topics and issues to businesses worldwide, and considering that over half of all MBA student enrollments are in part-time programs (62.5% in the United States, 55.3% in Canada, and 52.2% elsewhere; [AACSB International, 2008]), the potential transferability of the

course design, with alterations where deemed appropriate by faculty, is nearly universal. Specific aspects of the course design that address this issue include:

Its potential delivery either through individual teaching, team teaching, or a combination of both.

May be taught by business faculty, non-business faculty, adjuncts, or even individuals from an institution's advisory board (depending on expertise and desired degree of involvement and within the requirements of accrediting bodies such as AACSB).

Compatibility with undergraduate as well as graduate programs in business.

COURSE EXPERIENCE OVERVIEW

In the course design we employ (see Figure 1), time outside of formal class periods is used to help accomplish course goals. On the three weekends with class sessions, the break period between Saturday sessions is used for themed lunches, where small-group discussions are featured focusing on current business events in a particular region of the world. The time between weekend sessions is also used to accomplish course goals – through required team progress advancing the simulation game. Finally, although not a required part of the course experience, a period of time after the completion of official course activities is identified, during which students who wish to may replay the simulation, without a team structure.

FIGURE 1. Course Schedule

FIRST COURSE WEEKEND

International Accounting Foreign Exchange	International Marketing Global Brand Management	THEMED LUNCH	International Marketing Market Entry Analysis

During the two week period between course meetings student teams play the simulation, select a Latin American country to enter with their brand and establish foreign sourcing.

SECOND COURSE WEEKEND

International Financial Management Capital and Risk	International Marketing Standardization vs. Customization	THEMED LUNCH	International Management Managing Multicultural Teams

During the one week period between course meetings, student teams continue the simulation, expanding regionally in Latin America and seeking to improve balanced scorecard results.

THIRD COURSE WEEKEND

International Marketing Presenting Simulation Game Findings	International Strategy Practical International Strategy Relocation	THEMED LUNCH	International Strategy Practical International Strategy Relocation – cont

For one month after the formal activities of the course are over students may play the entire simulation from the beginning as individual product managers, building on all they have learned to see if they can improve upon their previous results.

Area Learning Objectives

By the end of the accounting session, students should be able to understand the role of accounting standards in the US and in foreign businesses, including political considerations, understand foreign exchange markets, hedging, and the implications of doing business in another currency, and understand that capital movement and capital investment is a global phenomenon, where the same investment may have different outcomes depending on the originating country of the capital investment. For the marketing area, by the end of the simulation and multiple sessions, students should be able to develop a foreign market-entry strategy, develop a regional expansion strategy for a brand, improve marketing efficiency through standardization of SKU offerings in regional foreign markets, and research, design, deliver, and critique individual team presentations. The activities and readings in the finance area allow for students to be able to analyze a complex investment-financing transaction from the standpoint of various project participants, illustrate how financial structuring of a project can shift or reallocate risk to project participants and away from the original project sponsor, and show the important role of ownership and control in financing transactions. Within the management session, students will better understand the concepts of emotional and cultural intelligences and realize their impact on cross-cultural leadership, identify issues that impact group and team dynamics in global companies, recognize work-life balance issues that arise in international contexts. Lastly, by the end of the strategy sessions, students should be able to appreciate the difficulties associated with overseas expansion when sending employees abroad.

CONCLUSION

Ultimately, no course delivered in a domestic, on-campus setting can completely capture the nuances of overseas experience. For students who have obligations or other limitations that prevent them from such an experience however, and for institutions that are constantly

evaluating costs and benefits of underwriting such initiatives, a course that accomplishes the same objectives without the actual international travel may be a worthwhile alternative. The course presented and discussed here brings a rigor to material, integrating different business fields, and injects an experience component to teaching global business at home.

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VOLUNTEER WORK AND SOCIALIZING ACTIVITIES: IMPACT ON CAMPUS INTERNATIONALIZATION

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ABSTRACT

The social and cultural adjustment challenges facing international students have always attracted the attention of university and college administrators (Pinheiro, 2001; Reedstrom, 2005; Zhao, Kuh &, Carini, 2005). As colleges try to make up for the loss in international recruitment in the post 9/11 phase, various volunteer efforts are encouraged to welcome, orient, and integrate international students into the American life and society (Wit, 2002). While serving their original purpose of asserting the friendliness and the welcoming gestures of host institutions to international students, these volunteer efforts aim indirectly to increase international enrollment and campus internationalization. Recognizing the possible potentials of these efforts and their expected impact on recruitment, retention, and success of international students at a Mid-Western public research university, this study examined the role of a range of volunteer efforts in engaging, recruiting, and retaining international students on an American higher education setting. Traditional qualitative techniques like interviews, document reviews, and observations were utilized in the data collection. Three themes emerged around collaboration between volunteers and the university including: university support for volunteer activities, obstacles to volunteer work, and the influence of volunteer activities on international students. Findings shed lights on ways to maximize benefits of volunteer work engaging and easing the adjustment challenges of international students and its impact on campus internationalization. Findings also showed that these efforts and activities, though partially recognized, might face challenges that hinder the achievement of their desired outcomes.

INTRODUCTION

International enrollment and retention at American higher education institutions witnessed a dramatic drop in the post 9/11 phase due to various political and security reasons (Institute of International Education, 2007). Recently, campus internationalization and international recruitment have been in the attention focus of American colleges. As colleges are trying to make up for the loss in international recruitment, various volunteer efforts are encouraged to welcome, orient, and integrate international students into the American life and society (Wit, 2002). While serving their original purpose of asserting the friendliness and the welcoming gestures of host institutions to international students, these activities aim indirectly to increase international enrollment. However, these efforts and activities, though partially recognized, might face challenges that hinder the achievement of their desired outcomes.

Recognizing the possible potentials of these efforts and their expected impact on recruitment, retention, and success of international students at Riverside State University (RSU), this study examined the role of a range of volunteer efforts in engaging, recruiting, and retaining international students on a higher education setting. This study aimed to find answers to the following research questions: 1) how much support volunteers get from RSU, 2) what the obstacles are facing volunteer efforts, and 3) how volunteer efforts would change the patterns of international enrollment and retention at RSU.

PERSPECTIVE AND THEORETICAL FRAMEWORK

College life includes all policies, practices, and attitudes that affect a college campus. These aspects encompass both curricular and non-curricular practices, ranging from a general mission statement of a college to the personal attitudes of faculty and students. The cumulative impact of all these factors comprises the environment of a college (Astin, 1992). The United States has a significant record as the number one destination of international students and scholars (Open Doors, 2009). The presence of international students at American universities offers a variety of advantages. They bring different ideas and perspectives to classrooms. They deliver an international experience to the American students who might not be able to travel abroad for an international exposure. Moreover, it is a commonly held belief these students often represent the finest of their home countries. However, international students continue to face social challenges. Therefore, higher education institutions continuously strive to help these students overcome the social adjustment challenges including: cultural, social, religious, and political challenges (*Hayes & Lin, 1994)*.

Pinheiro (2001) qualitatively explored how international students perceived their learning experiences on American campuses to be both positive and negative. The positive and preferred experiences were characterized by the themes of engagement and connectedness, while negative experiences were characterized by disengagement and disconnectedness. Zhao et al. (2005) studied the differences and possible similarities between American and international students on campus involvement. The study asserted the positive relationship between the percentage of international students and their integration into campus life. Presenting a case study of internationalization efforts at a two-year college, Reedstrom (2005) explored the ways in which internationalization grew and changed over time. The study also revealed how the will of a college community was able to make internationalization an integral part of a college's culture. Because of the small numbers of international students present on campuses and the variety of programs they join, most of the studies exploring international students' engagement and integration into American universities usually took the qualitative approach. Various studies used Schein's (2004) construct levels of culture to measure college internationalization.

METHODS

Instrumental to this qualitative study were field observations of events and document reviews. However, the primary data sources were open-ended interviews with college

administrators, volunteer coordinators and international students. Three sampling strategies ensured the objectivity of research findings, the intensity strategy, the snowball strategy, and information rich case. After obtaining an Institutional Review Board research approval, an *apriory* code list was used to guide observations of various activities integrating international students into campus life. The review of official university documents as newsletters, memos, and meeting minutes of the International Programs Advisory Committee revealed more themes. Synthesizing the information collected with the theoretical background helped in developing protocols of ten structured interviews. An emergent code list was used to develop a matrix of themes to analyze the data. Themes in the matrix included: benefits for the college community, communication barriers, support needed from the college, and support offered from volunteers.

FINDINGS

Several volunteer activities take place at RSU with different goals including: building relationships between international students and American students; educating the students at public schools about the foreign countries through recruiting international students as speakers; establishing communication dialogues among international students; and engaging spouses of international students in a very casual setting. Three themes that emerged around the process of collaboration between volunteers and the university included: RSU support for volunteer activities, obstacles to volunteer work, and influence of volunteer work on international students.

RSU Support

The amount of support provided to volunteer activities varied per activity and sometimes per event depending on the coordinators' assessment of the nature of the activities, the communication between the coordinators and university administration, and the numbers of participants. Some enjoyed the freedom to organize their sessions and meetings without worrying about supplies, refreshments, or catering and simply saved their power to programming and designing activities. Others preferred not to ask the RSU for any support to avoid the pressure to conform to university policies restricting certain activities and topics of the discussion.

Obstacles

Volunteer coordinators faced physical and social obstacles. The physical obstacles included venue, logistics, supplies, and transportation. The social obstacles included scheduling, staffing, diverse needs of international students, linguistic barriers, and cultural barriers. None of the coordinators reported any physical obstacles as a real challenge. Coordinators highlighted the linguistic barrier where international students would cluster with other students from their countries and speak in their native language instead of using English. Coordinators managed to overcome this through pairing international students with American students or other students who do not speak the same native language. Scheduling activities in a suitable time that fits in

the schedule of international and American students was another difficulty. Consistency of such activities was an issue that students brought up in cases of the absence of the coordinator.

Influence on Recruitment

Volunteer activities had a direct influence on campus internationalization. They also served as a continuous deliberate effort to engage, orient, and help international students on campus. These activities also provided them with the college survival skills necessary for the accomplishment of their goals. In their recruitment campaigns for international students, administrators at RSU always use these activities which have been shown in fliers and newsletters. Moreover, another method of recruitment which proved effective was the "word of mouth" spread by international students to their friends, relatives, and colleagues in their home countries. Administrators looked at the increase of international recruitment as a result of a group of factors with varying degrees of influence and counted volunteer activities as one of these.

IMPLICATIONS AND CONCLUSION

In essence, this study captured and illustrated the values, roles, and relationships that emerged from implementing volunteer work to help international students and its influences on international recruitment. Volunteer efforts at RSU needed more organization and goal-oriented planning from the part of the university. Coordinators exerted efforts in easing the challenges of international students in their new host culture providing more campus involvement and engagement. These activities may be partially credited for the increase in international enrolment rates. Colleges and universities do not usually support these activities (Reedstrom, 2005). However, the positive influence of these activities on the increase of international enrollment cannot be denied (Knights, 2004). Through providing a welcoming environment for international students, these activities may supersede their primary goal of accommodation to a more cost effective goal of increasing the retention rates of these students. Therefore, more coordination from the part of the university might increase the success rate of these activities and increase international students' retention rates. Findings asserted the value of volunteer efforts and highlighted needed measures and considerations for practitioners working for the goals of recruiting, supporting, and retaining international students. Future research may endeavor to reach a larger sample size through a multi campus quantitative approach.

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MISSIONS AND PRACTICES OF STUDENT LEARNING ASSESSMENT: AN INTERNATIONAL COMPARATIVE STUDY

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ABSTRACT

Classroom assessment of student learning is part and parcel of the educational processes that both faculty and administrators use to guide their practices, ensure program effectiveness, and use as checkpoints for student achievement (Palomba & Panta, 1999). Mission statements and articulated policies often mention varied and continuous assessment techniques of student learning. However, how much they are reflected on the educational practices varies due to different factors like government mandates, requirements of accreditation, social factors, market forces, and accountability to stake holders which can all be credited for the degree of adherence to assessment best practices (Burke, 2005). This qualitative study is an effort to explore student learning assessment techniques at an American university which adopts the active learning approach and an urban Egyptian University where efforts of adopting the comprehensive learning approach are taking place. Research questions included: What are the evaluation tools utilized to measure students learning? What are the perceptions of faculty and students about the adequacy of these evaluation techniques? To what levels are these techniques standardized? What are the efforts made to get student feedback about the efficiency of these techniques for improvement purposes? Recommendations for maximizing student success and learning outcomes included: more campus professional development initiatives, adopting a progress and developmental approach of assessment, and involvement of professors and students in designing the assessment process. The study offers valuable information for administrators of higher education institutions and education faculty focusing on assessment, accountability, administration, curriculum planning, student success, and student engagement.

INTRODUCTION

Assessment of student learning cannot be ignored as a guide for educational practice. College and university faculty and administrators use assessment to ensure course and program effectiveness. Assessment results are often looked at as checkpoints for student achievement (Palomba & Panta, 1999). Although college mission statements and articulated policies often mention varied and continuous assessment techniques of student learning, their reflection on the educational practices varies due to different factors like government mandates, requirements of accreditation, social factors, market forces, and accountability to stake holders (Burke, 2005). This qualitative study explores learning assessment techniques at an urban American university

adopting the active learning approach and an urban Egyptian University striving to adopt the comprehensive learning approach.

PURPOSE AND RESEARCH QUESTIONS

The present study is an effort to explore learning assessment techniques in two universities: Riverside State University (RSU), an American Mid-Western university which adopts the active learning approach, and Delta University (DU), an urban Egyptian University where great efforts of adopting the comprehensive learning approach are taking place. By comparing findings the researchers aimed to answer the following research questions: what evaluation tools are utilized to measure students learning at both universities, how faculty and students perceive the adequacy of these evaluation techniques, and how these techniques are standardized.

PERSPECTIVE AND THEORETICAL FRAMEWORK

Higher education institutions have a commitment to student learning. Information about how well students are learning to use the plethora of skills and abilities is always essential to develop a deeper understanding of the quality of student learning in each program of study and to provide reliable answers to external evaluators like peers, policy makers, accrediting bodies, and the public (Palomba & Banta, 1999). Effective assessment information usually stems from the learning outcomes of individual courses and programs as providing feedback on individual progress toward course goals. These also generate valuable information about collective student learning outcomes. Therefore, documenting student learning is personally useful and contributes to program level assessment as well. Such processes also give educators the chance to decide whether the courses and programs are contributing their expected share to student development and growth. Moreover, assessment helps the educators to examine the efficiency of the curriculum and whether students of all their experiences have the knowledge, skills, and values that graduates should have (Palomba & Banta, 1999). Institutional missions and articulated visions are needed to establish the standards for these practices to optimized student learning outcomes and maximize the efficiency of teaching efforts.

A wide range of procedures comprises the total of classroom assessment that present systematic information about student learning (Linn & Miller, 2005). This variety of classroom assessment usually includes quantitative measures and qualitative ones (Lei, 2008). Though differing due to the complexity and varieties of educational programs, formal assessment tools usually include a combination of some of the following: tests, quizzes, class participations, group discussions, in-class activities, homework assignments, portfolios, laboratory activities, cooperative learning, learning journals, research assignments, oral presentations, group projects, field work, and peer and self evaluations (Popham, 2002). Assessment is an important component in designing any curriculum, not only measuring how students are progressing but also providing feedback on other instructional components like choice of material and faculty performance. Assessment is the basis for any later improvement effort to better the educational

services and steer teaching towards the accomplishment of desired learning goals (Diamond, 1998). The informed purposeful choice of assessment tools maximizes student learning outcomes while using insufficient or inadequate assessment tools can provide misleading information that would threat the achievement of desired goals.

METHODS AND TECHNIQUES

This study explored missions and practices of classroom assessment in two universities utilizing qualitative research tools. Participants in this study fell into three categories existing on both sides of the comparison: 1) faculty members not teaching in the education discipline, 2) graduate and undergraduate students, and 3) a faculty member from the college of education. Beginning with an *apriory* code list, a pilot study of various techniques used at both institutions was conducted. They reviewed official university documents that discussed assessment techniques, standards for assessment, and achievement goals. Synthesizing collected information with the theoretical background helped in developing protocols of various structured interviews that included college students, education faculty members, and other faculty members not teaching in the education discipline. Building on field notes, interviews, and document reviews, an emergent code list was used to develop a matrix of themes and codes that helped in chunking the data. Themes included: missions articulated, classroom practices, active learning, frequent assessment, varied assessment, utilizing student feedback, and assessment data utilization.

RESULTS

Findings showed that assessment techniques at RSU, though not perfectly reflecting best practices, were closer to the articulated policies. On the other hand, at DU, such techniques were not reflective of the articulated assessment policies of the institution. Policy makers, college administrators, and individual instructors need to consider the benefits of applying best practices at their institutions to maximize student success and enrich student learning experiences. More campus professional development initiatives are needed to communicate the importance of varying assessment techniques and using them from a progress and developmental approach rather than outcome based indicators. Involvement of professors as well as students may result in higher application rates at both campuses towards maximizing student success and learning outcomes as well.

Formative and Summative Assessment

Various forms of summative assessment were used consistently at both institutions. However, they were much more diverse at RSU than at DU. At RSU, formative assessment was often used throughout the university courses and programs. Various forms of assessment occurred along the educational practice to inform decision making. However, some courses and programs missed the value behind formative assessment, though using it as part of the educational practice. At DU, formative assessment was introduced in several programs. The

forms of formative assessment at DU always take the shape of a midterm exam that looked like the final exam. Its usage did not exceed being a ringing bell to grab the attention of students about their progress. Very few professors reported using the midterm as a way of sensing whether learning outcomes are being achieved or not.

Benchmarking

Benchmarking was institutionally integrated into RSU assessment plans of programs and colleges. Benchmarking institutions and programs were pre-identified. Efforts were continuously exerted to compare program offering and program outcomes to those at peer institutions. These comparisons were always utilized during program reviews and in the case of planning to introduce new programs. Although benchmarking was identified in the college assessment plans, it was minimally utilized because professors and department chairs argued that peer institutions are not really similar to DU. However, benchmarking was used on an informal basis by some departments when department chairs or program directors had a relationship with their peers at another institution.

Direct and Indirect Assessment

At RSU, both direct and indirect assessment forms were utilized. Indirect assessment was often used to confirm results of direct assessment data. However, the consistency of such usage was not affirmed through faculty and administrators reflections. At DU, although both methods are well articulated, there is a large divide between the data collected from direct assessment and indirect assessment. Faculty and administrators reported that both types of data are collected but at the same time did not see a relation between the data giving more weight to direct assessment data as the most reliable proof of student learning. Faculty working on the accreditation process at DU expressed an awareness of the general faculty perception about indirect assessment. They reported that they initiated some workshops and seminars to raise the awareness about the value of indirect assessment as an indicator of student learning.

CONCLUSION

The study offered an individualized insight into the assessment practices of RSU and DU from the point of views of faculty, administrators, and students. Findings of the study add to the existing assessment literature. Analysis of data offered recommended techniques to bridge the practice shortfalls and apply latest trends in classroom learning assessment. The study also offered a comparative educational glance on the different aspects influencing assessment at the two institutions studied. It also posed research questions that could be handled in future research.

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BEHIND THE VEIL: CULTURAL CHALLENGES AND OPPORTUNITIES FOR A NEW INTERNATIONAL STUDENT GROUP

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ABSTRACT

The number of Saudi students studying in the United States quintupled from 3,035 students in 2005 to 15,810 students in 2010 due to a fully funded Saudi government scholarship (Open Doors, 2010). As students originating in a cultural background differing from the prevailing principles of their higher education institutions, Saudi students face several challenges. The cultural challenges are one of the most frequently apparent among these challenges (Constantine, Okazaki, & Utsey, 2004; Miller, 2002). Building upon the relationship between the cultural beliefs and student academic achievement, this study aimed at examining the cultural aspects of the increased presence of Saudi students enrolled in the various academic programs at a Mid-Western research university, Riverside State University, a pseudonym. The study followed the qualitative method for data collection and analysis. After conducting initial site observations and document reviews, primary data were collected from open ended interviews with students, administrators, and professors at the university. Study findings revealed various cultural implications arising from the continuous increase of Saudi students on American higher education campuses. The cultural construct was shown to have several subsequent aspects including: transition, academic life, and social life. University support systems were explored to demonstrate a replicable model that can be adopted to ease the cultural adjustment of these students. Recommendations demonstrate how various techniques can be utilized to increase Saudi students' engagement for academic success.

INTRODUCTION

Cultural challenges are one of the most frequently researched among these challenges that face students originating in cultural backgrounds different from the prevailing principles of their higher education institutions. A surge in the numbers of graduate and undergraduate Saudi students enrolled at American institutions due to a fully-funded Saudi government scholarship moved Saudi Arabia to the seventh rank among the countries of origin of international students in the United States for the first time with 15,810 students (Open Doors, 2009). The presence of this growing student group on American campuses has significant implications for university administrators. The current study aimed at examining the cultural aspects of the increased presence of Saudi students enrolled in the various academic programs at Riverside State University (RSU), a pseudonym, where they represent one fourth of the international population.

RATIONALE AND RESEARCH QUESTIONS OF THE STUDY

The growing presence of Saudi students on American campuses has significant implications for student affairs professionals, college professors and university administrators. Although Saudi students share many aspects with other international students, they experience different circumstances due to distinctive economic, academic, psychological, social, cultural, religious, and political factors (Miller, 2002). This study explored one aspect of this phenomenon at RSU concerning the cultural construct of a sample of these students and its influence on their academic and social performance. International students' adjustment patterns, linguistic problems, campus involvement, and academic achievement were frequently investigated in research. However, there are no recent studies that addressed the cultural construct influence on Saudi students' academic achievement at American institutions. This scarcity warrants the current study exploring the multifaceted dimensions of Saudi students' cultural background and the measures that can address their adjustment challenges to maximize success and benefits from their college experience. Specifically, the research aimed to discover: 1) what challenges face Saudi students as a result of their cultural background, and 2) the effectiveness of support systems available for these students with respect to easing their adjustment and engaging them in the college life at RSU.

LITERATURE REVIEW

Beside the linguistic barriers, international students usually face challenges due to transition when placed in their foreign educational institution. These include: 1) finding accommodations and day to day life necessities, 2) acquiring academic skills and learning techniques, and 3) familiarizing and engaging themselves with college social aspects.

Engagement and Inclusion

According to Keup (2006), the friendliness of campus climate and welcoming gestures to all students with elimination of fear, oppression, and stereotype threats have been established as important factors in easing student adjustment and consequently supporting optimal student development and positive learning outcomes. Gloria and Ho (2003) argued that the strength of the social support elements like comfort in the college environment, social relationships, peer support, and students' self-beliefs are predictors of student success, college satisfaction, and academic persistence.

Collectivistic and Individualistic Cultures

Different cultures were often classified on the collectivistic-individualistic continuum (Triandis, 1994). This continuum was often used to conduct cross-cultural studies focusing on individual perceptions of self, roles in society, importance of goals, individual and collective identity, measures of success, and individual gains. Due to the amount of behavioral pattern

restrictions which the society places on its individuals, learning styles of college students differ according to their culture of origin (Ma & Schoeneman, 1997). In collectivistic societies, the students receive knowledge from the teachers who embody the role of potential sages, while students' individual insights are not valued because learning and teaching is a responsibility for the good of the collective (Pak & Sands, 1996). Students in individualistic societies are responsible for their learning where instructors act as guides rather than experts in the discipline. Institutions in individualistic cultures provide the learning environment where students can self initiate learning and get personally engaged in a self directed quest (Ma & Schoeneman, 1997).

Challenges for Saudi Students

Saudi Arabia ranks high in the collectivistic category as demonstrating adherance to traditional customs and social values (Long, 2005). Therefore, individuals from collectivist societies are expected to demonstrate high collectivistic behaviors that shape their conceptualization of the relationship with others both within their own group and outside of their group (Caldwell-Harris & Aycicegi, 2006). Such a conceptualization influences Saudi students' understanding, feelings, and reactions toward their situation in the United States as highly collectivist individuals placed in a very individualistic society. Possessing an orientation that is incongruent with societal values may represent a risk factor for individuals (Caldwell-Harris & Aycicegi, 2006). Differences between the individuals' type and the society in which they live can produce various influences on those individuals with dependent personalities, especially their behaviors like social anxiety, obsessive–compulsive disorder, and various types of depression (Darwish & Huber, 2003). Moreover, some students from collectivistic cultures may lack the requisite skills to make new friends outside of their group (Pak & Sands, 1996).

METHODS

This study utilized qualitative research tools including document reviews, field observations, and in-depth interviews. Using an information rich case as a sampling strategy increased the objectivity of research findings. International students at RSU account for almost 4% of its student body providing a variety of constructs enriching the circumstances of international students at RSU. Participants included two college professors, two college administrators, five male and three female Saudi students. The students were recruited through recommendations of professors as active and reflective students. Primary data sources were 12 one-hour open-ended individual interviews. Participants responded to a topical interview protocol eliciting their feelings, emotions, and experiences at RSU over an academic year. The components explored by the interview questions included influence of the culture of origin, cultural challenges, transition, social life, and support systems at RSU. After transcription, the data were coded and categorized within an emergent framework of relevant themes.

FINDINGS, IMPLICATIONS AND, RECOMMENDATIONS

Culturally, a need to raise the awareness among RSU faculty and administrators of Saudi students' needs has arisen from the study. On the other hand, more programs are needed to inform Saudi students about the cultural norms in place at American colleges and in the American society in general. In this respect, multicultural seminars, workshops, and classes may be helpful if integrated as part of their college programs. Introducing activities that aim at minimizing the stereotype threat may help Saudi students at RSU to understand that their actions are interpreted as representing them as individuals rather than their collective group. College administrators and academic departments usually initiate support systems to help these students adjust to their new context and achieve their desired educational goals. Advisors and orientation leaders can play an essential role in easing many transitional obstacles like social, political, cultural, academic, and linguistic barriers. Several social and community groups can also be supportive for these students upon arrival at the American institution. Utilizing other Saudi students is another successful mechanism that can be effective by building on the fact that they like to offer help to other group members.

Increasing group and pair work in classes is one technique for increasing both linguistic and academic levels. Programs that encourage collaborative and cooperative learning strategies can help them acquire such skills and maximize their learning experiences. Therefore, initiating learning communities and study groups may be other beneficial techniques that can help Saudi students through getting them to practice their language within the jargon of their academic topic. Increasing the effectiveness of orientation programs to address the variety of the aforementioned challenges together with introducing activities that pair Saudi students with other American students or provide them with the opportunity to mix with them in a relaxed environment can help these students cope with the new environment. Departments could provide training to educate faculty and staff about the characteristics Saudi students possess.

CONCLUSION

Increasing presence of Saudi students in American colleges and universities warrants consideration beyond the usual issues of linguistic difficulties and adjustment problems to include issues of engagement and academic achievement. University administrators bear responsibility to provide co-curricular and social opportunities structured to help orient Saudi students to their new learning environment. More realistic orientation programs and information sessions may help to positively influence Saudi students' educational choices and engagement patterns. Social activities should be organized in ways to promote student interaction and foster connections with students outside of the Saudi community. It is important for faculty and academic departments to consider the cultural beliefs held by Saudi students.

Programs that encourage collaborative and cooperative learning strategies can help them acquire needed learning skills and maximize their learning experiences. Creating academic activities within classes which apply critical thinking and encourage setting and achieving goals can provide opportunities for students to appreciate and further develop their personal abilities.

Interactive learning environments and utilizing peer modeling may help students be more engaged with their peers. Further, faculty can structure learning activities that provide opportunities for students to build on success and gain confidence in their academic abilities.

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COMMUNITY EDUCATIONAL RESOURCES AND CHARACTERISTICS, STUDENT ATTRIBUTES, AND PERFORMANCE IN A COLLEGE ONLINE COURSE

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ABSTRACT

This study examined whether freshmen students that graduated high school from resource-poor areas had a higher probability of failing an online college course than students from resource-rich areas. The analysis suggests that this is not the case. In order to identify pass/fail determinants, logistic regression using high school district size, teacher/student ratio, librarian/student ratio, percent minority, percent qualifying for free or reduced lunch prices, district median income and city population, student ACT scores and pretest scores as candidate independent variables were regressed against the probability of failing or passing. The only variable that was statistically significant was student ACT scores. In a final analysis, student pretest scores were found, likewise, to be only statistically and practically a function of their ACT scores. Based on these analyses business course designers and instructors do not have to worry about biasing results based against students who are from resource-poor areas.

INTRODUCTION

Students come from a variety of communities with different resource levels. One of the authors serving as a judge for students competing for scholarships, observed that many students from small rural communities have very high grade point averages and relatively low ACT scores. One tentative explanation for this discrepancy is that students at very small resource-poor communities do not get as good an education as students in relatively resource-rich areas: Educational options may be limited (e.g., small libraries, fewer technological tools per student), the pool of talent for teachers may be restricted, and the set and depth of knowledge mastered by fewer educators may be relatively limiting. Another phenomenon observed by the other author was a very high failure rate in a relatively undemanding online course at Southern Utah University (SUU) usually taken by freshmen. It was hypothesized that students from resource-poor areas might be more likely to have difficulty with an online course. Therefore, this study was conceived to test the hypothesis that the probability of failing the course was dependent on the educational resources of the student's hometown. A second objective was to take a broader perspective to identify factors that influence the probability of failing. A third objective was to examine the determinants of a pretest.

At SUU students are required to either take or test out of LM 1010 Information Literacy, a 1-credit online course designed to develop information literacy skills in order to allow students

to perform basic research. The course is a general education requirement, and enrollment is high and largely composed of freshmen. Due to the number of students, the course is delivered online. Even with the care taken to help students succeed in the class, a substantial number fail the course. For the fall semester of 2007 when data was collected for this study about students who earned grades of either A or F in the course, of the 521 students eligible for the study, 442 students received a letter grade with 33.9% failing and 66.1% earning an A or A-.

METHODOLOGY

In addition to the grades received, information was collected from the university's registrar's office regarding each student's ACT Score and their parent's address. Based on this, the National Center for Education Statistics (http://nces.ed.gov) database provided school district data for the following variables: the percent considered to be a member of a minority (Percent Minority), the percent that received school nutritional assistance (Percent Free & Reduced Lunch), the Pupil/Teacher Ratio, the Pupil/Librarian Ratio, and the Median Family Income. The Skills Score, representing each student's performance on a pretest given after enrolling in the course but prior to any lessons was also recorded. The Skills Score ranged from 0 to 100 in increments of 10 (e.g., 10, 20, and so on. Finally, the population from the student's hometown was obtained from the Census Bureau's American FactFinder page (http://factfinder.census.gov/home/saff/main.html). The final categorical variable, provided in Table 1, was the NCES District Category appropriate for each student.

Table 1: NCES school district categories

NCES District Category	Frequency (Percent)	NCES District Category	Frequency (Percent)
1-Large City	13 (2.5)	5-Large Town	1 (.2)
2-Mid-size City	66 (12.7)	6-Small Town	151 (29.0)
3-Urban Fringe of Large City	50 (9.6)	7-Rural outside CBSA/MSA	56 (10.7)
4-Urban Fringe of Mid-size City	176 (33.8)	8-Rural inside CBSA/MSA	8 (1.5)
		Total	521 (100.0)

Resources and Grades

A binomial test was employed to test the hypothesis that students from areas with low resource levels do poorer than students from resource rich areas. A student was classified as from a resource-poor area if the area from which they came met the following criteria: 1) They were from Rural Outside CBSA/MSA (NCES category 7) or from a Small Town (NCES category 6), with 2) fewer than 1500 students enrolled in prekindergarten – twelfth grade, and with 3) an area-wide median income less than $47,153, the weighted average income of the students in the data set. A student was considered from a resource rich area if their area met the following criteria: 1) the area was classified as being a Large City, Mid-Size City, the Urban Fringe of a

Large City, the Urban Fringe of a Mid-Size City, a Large Town, or a Rural area inside CBSA/MSA (NCES categories 1-5 and 8), with 2) more than 13, 294 students enrolled in pre-kindergarten through twelfth grade (the weighted average of the enrollment numbers), and with 3) a median income greater than $47,153. Table 2 provides the data employed.

Table 2: The number of As received by students from resource-rich and resource-poor areas

Student Classification	No. of As	Number of Students	Proportion of As
Resource-Poor	16	27	59.26%
Resource-Rich	142	206	68.93%
TOTAL	158	233	67.81%

Using the binomial formula, the probability of 16 or fewer As being awarded to a random sample of 27 students if the probability of receiving an A is equal to 68.93% is 18.83%. Therefore we cannot reject the null hypothesis that the probability a student from a resource-poor area will receive earn an A is the same as if they are from a resource-rich area.

A second attempt was made to apply the binomial distribution. Eight students were from either Small Towns (NCES category 6) or Rural Areas Outside CBSA/MSA (NCES category 7) with more than 38.82% of the student body qualifying for free or reduced-price lunches and with a Pupil/Teacher Ratio greater than 20.7. Both 38.82% and 20.7 were median values in the data set. Four of the students earned an A, and four failed the class. The probability that four or fewer students would earn an A if the population probability is 68.93% is 21.40%. Hence, again, the null hypothesis cannot be rejected.

A final test employed compared the distribution of As and Fs using a chi-square test of independence. Once again, the null hypothesis could not be rejected.

Exploratory Examination of Grade Determinants

Logistic regression was performed to identify what characteristics, if any, in the data set differentiates A students from those who fail. A stepwise forward logistic regression using the likelihood-ratio criterion was utilized through PASW (formerly SPSS) software. The significance level for variable entry was .05, and a significance level of .10 was chosen for dropping previously entered variables. A random sample of data regarding 270 students was used to build the model, and data regarding an additional 159 students were withheld and used to validate the model. The independent variable candidate set consisted of the following: Skills Score, City Population, ACT Score, Percent Minority, Percent Free & Reduced Lunch, the Student/Teacher Ratio, the Pupil/Librarian Ratio, the Median Family Income for the district, and the Urban/Rural categorical variable.

The only variable that was significant in the final logistic model was the ACT Score. With regard to the cases used for model building the overall percent correctly classified went from 68.5% to 74.8%. With regard to the holdout cases, the percent correctly classified went from 100% to 77.5%. With regard to predicting a failing grade, the logistic regression only

correctly predicted Fs 37.6% of the time using cases employed in model building, and 19.4% of the Fs in the holdout sample.

With regard to other considerations, the approximate percent of variability accounted for with the model was a modest 20.2%. A statistical test indicated an acceptable fit. Analysis of residuals did not indicate any problems.

Converting the results into probability values, those students with an ACT of 17 had only a 29.2% chance of earning an A (and hence a 70.8% chance of failing), those with an ACT score of 19 a 50.9% chance of earning an A, and the probability of earing an A for those with an ACT score of 21, which is close to the national average, had a 62.4% chance of earning an A.

Skills Score Determinants

A stepwise regression was employed with student Skills Score as the dependent variable. It was believed that a student's Skills Score would be at least partially a function of a student's education, and it was supposed that this would presumably be partially a function of the school's resources. Candidate independent variables were City Population, ACT Score, Percent Minority, Percent Free/Reduced Lunch, the Pupil/Teacher Ratio, the Pupil/Librarian Ratio, and Median Family Income. The criterion for independent variable entry was a significance level less than or equal to .05, and the criterion for removal was a significance level greater than or equal to .10. As before, the data was split into a portion for model building (n=293) and a holdout sample.

Two variables, in 2 steps, were in the final regression: ACT Score and the Pupil/Librarian Ratio. The first model, with ACT Score entered, had an R-square of .269, and the second and final model, with both significant variables, had an R-Square of .279. Hence, the ACT Score was the only practically significant variable in the regression. The R-square using a holdout sample was .226. The beta coefficients were positive for both variables.

DISCUSSION

Tests of the significance of resource levels do not support the notion that resource-rich area students have an advantage over students from resource-poor areas. This may be true, or the tests might be too crude to pick up real differences. For example, means of coping with low resource levels might mitigate disadvantages. Further, it may be that other factors, such as teacher personnel policies, variability within each independent variable, the impact of college admission standards, or interest in higher education may mask the impact of level of resources. Finally, it may be that those college students from different districts are more similar to each other than they are to average students from their school district. To the extent the results are true it is encouraging to note that students from rural, poor areas with low enrollment are not at a disadvantage with respect to students from wealthier, urban areas with higher enrollments.

With regard to the logistic regression results, where a student's ACT score was the only significant independent variable in predicting passing the course, the results are mixed. The ACT variable only accounted for roughly 20% of the variability found in the data, but it was still clearly significant. The fact that the percent of failed students correctly predicted by the model

was quite low means that variables not in the model must be significant, or that using district-wide mean values for the independent variables are just too crude to permit meaningful model building: For example, the median family income for an entire school district may not meaningfully reflect differences among individual student family incomes. Again, to the extent variables do reflect meaningful differences it is encouraging that students from districts which are relatively poor, or which have higher minority populations, are not disadvantaged.

Regarding the determinants of student pretest scores (Skills Score variable) ACT scores were significant. The Pupil/Librarian Ratio was statistically significant, but not practically so, in that it increased the R-square value by 1%. Once again, while it is encouraging that district-level variables, such as median family income, percent of students that qualify for reduced or free lunches, etc. are not significant, it may be the measures are not appropriate differentiators.

The fact that the R-Squares in this study vary from 20% to 30% suggests that other factors may be important. Student motivation levels, college adjustment problems, homesickness, and a lack of nonacademic life skills may all be significant determinants of how a student will fare in an online freshman-level course.

Limitations of the Study

The present study focused on ACT and school district variables to explain success and failure in an online course. No behavioral traits or past experiences were examined. Student GPA was not employed. These elements could have added to the discussion and may have helped to explain some of the variability. The course enrollment is mostly freshmen. The results we found for this online course may be different for courses aimed at upper division students as freshmen may have unique characteristics and pressures that upper division students do not.

CONCLUSION

ACT scores were the only variable among those we examined to be a significant predictor of success or failure in LM 1010 Information Literacy, an online course. Variables regarding school districts and resource poor students were found not to be significant. The Pupil/Librarian ratio was mathematically significant, but not practically so accounting for only a 1% increase in the probability. Better access to a librarian did not significantly impact the outcomes in a library skills course in this study.

The results, though tentative, suggest that online business instructors and course designers do not have to be overly concerned about biasing the results against students who graduated from resource-poor areas.

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STUDENT PERFORMANCE ON THE CALIFORNIA CRITICAL THINKING SKILLS TEST

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ABSTRACT

This paper examines the determinants of performance on the California Critical Thinking Skills Test (CCTST. The sample consists of 96 students at a midsized regional institution located in the Southwestern region of the United States. The empirical model employed controls for grade point average, standardized test scores (SAT/ACT), online courses, gender, ethnic background, age, major, and transfer students. Classification as a business major, grade point average, and ability measured via standardized test scores are the three model variables that are positive and statistically significant. The only statistically significant variable with a negative coefficient is the transfer variable, which controls for students transferring 18 or more hours from another university or community college. The results indicate that students completing 18 or more hours in the online environment score approximately five percent lower on the CCTST exam, although the result is not statistically significant. None of the demographic variables in the model are statistically significant determinants of performance on the CCTST exam.

COMMUNITY OF INQUIRY: OVERVIEW OF A FRAMEWORK FOR ONLINE BUSINESS EDUCATION

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ABSTRACT

Online learning has grown as a program delivery option for many colleges of business. The Community of Inquiry framework consisting of three interrelated elements - social presence, cognitive presence, and teaching presence - provides a model to guide business faculty in their online course design.

INTRODUCTION

Online learning (OLL) has become a viable option for many post-secondary institutions. In the 2006-2007 academic year nearly 9 million individuals were enrolled in postsecondary online courses (Parsad & Lewis, 2008). During the same time frame 60% of all 2 and 4-year colleges offered online courses with nearly a third offering hybrid courses (Parsad & Lewis, 2008). Hybrid, or blended learning, courses combine both face-to-face (F2F) and online delivery using synchronous and asynchronous communications (Palloff & Pratt, 2007). In the eight year period 2002 to 2009 the number of students taking at least one online course grew at nearly a 20% growth rate from 1.6 million students in 2002 to 5.6 million in 2009 (Allen & Seaman, 2010). Colleges of Business accredited by The Association to Advance College Schools of Business (AACSB) show similar increases in OLL. Using annual survey data from 277 AACSB member schools, online business programs grew from 1% in 2001-02 to 3% in 2008-09 with the greatest growth at the Masters of Business Administration (MBA) level ("AACSB Member Schools", 2010). This specific study focused narrowly on programmatic delivery by instructing schools "to select 'online' only if their program may be completed in full by students enrolled only in courses taught online". ("AACSB Member Schools", 2010, para. 4).

As colleges, in general, and business schools, in particular, add OLL options, faculty will need an appropriate pedagogy. Students entering college today have lived primarily in a digital world where accessibility to anything is a click, or a tap, away on a laptop, iPhone or iPad (Tapscott, 2009; Wilen-Daugenti, 2009). For this generation of students multitasking, customization, collaboration, and speed as norms (Oblinger, 2003; Oblinger & Hawkins, 2005; Tapscott, 2009; Tapscott & Williams, 2008). They dislike "lecture-based, information-dated, responsive-deficient silos of learning comprised of outdated technologies from the mid-20th century" (Pletka, 2007, p. 13). Business faculty need an e-pedagogy that focuses on the skills necessary to create a collaborative learning environment for a community of learners, or community of inquiry. (Garrison, 2011; Paloff & Pratt, 2007). This paper describes the community of inquiry (CoI) model as a framework to guide course design for online business education.

COMMUNITY OF INQUIRY

The community of inquiry (CoI) model posits that the educational experience is achieved through three interrelated elements - social presence, cognitive presence, teaching presence (Garrison, 2011; Garrison, Anderson & Archer, 2000). Garrison et al.'s (2000) original study was based on the text based environment of computer-mediated communications and computer conferencing. Garrison's (2011) latest iteration of the CoI model captures the decade of research conducted by him and others in developing an understanding of OLL. For example in the current model social presence is defined as the "the ability of participants to identify with a group, communicate purposefully in a trusting environment, and develop personal and affective relationships progressively by way of projecting their individual personalities (Garrison, 2009b)" (Garrison, 2011, p. 23). Cognitive presence is defined as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry (Garrison, Anderson, & Archer, 2001, p. 11)" (Garrison, 2011, p. 24). Finally, teaching presence is defined as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes (Anderson, Rourke, Garrison, & Archer, 2001)" (Garrison 2011, p.24).

The initial research methodology required investigators to examine the archival postings of students and teachers in threaded discussions for evidence of each presence. Garrison et al. (2000) proposed a set of categories and indicators for each presence that served as a coding template in the research effort and a guide for online course designers. For example, open communications, a category of social presence, may be indicated by self projections, expressing emotions (Garrison, 2011). Cognitive presence may be classified as a triggering event with a sense of puzzlement as an indicator (Garrison, 2011). Finally, Garrison (2011) states that design and organization, a teaching presence, may be indicated by setting curriculum and methods. However, this qualitative approach limited samples to single institutions thereby limiting the ability to generalize and explore the interrelationship presence with other variables (i.e., satisfaction, learning outcomes) (Arbaugh, 2008; Arbaugh et al., 2008). A quantitative methodology using a valid survey instrument was needed to overcome these barriers.

Garrison, Cleveland-Innes, and Fung (2004) provided an early approach to quantitatively examine the elements of the CoI model with other variables. Specifically, they focused on the role adjustment online students face compared to F2F learning environment. According to the authors online learners have the normal roles of any learners plus the roles of using technology, managing vast amounts of communications from peers and instructors, developing a self directed learning perspective, and designing an anytime, anywhere learning mindset. Using 65 graduate students the authors developed a 28 questionnaire based on the CoI framework (i.e., social presence, cognitive presence, teaching presence). The questionnaire consisted of two identical forms with the exception of perspective. One form asked students to rate their anticipated online learning experience with their previous F2F learning. The other form asked students to rate their anticipated online learning with experience online learners. Using factor analysis, the questionnaires showed the CoI structure was validated but the order of the factors differed. Garrison et al. (2004) concluded "a face-to-face learning experience is viewed as more externally

oriented (i.e., social and teaching presence), while online learning is viewed as more cognitive or internally oriented. Thus, online learning would be perceived as requiring greater individual responsibility" (p. 70).

The search for a valid survey instrument was extended when Arbaugh et al. (2008) used a survey instrument with a multi-institutional sample. Their 34 question CoI framework survey was administered to 287 graduate students at 4 institutions across the United States and Canada. Factor analysis supported the CoI instrument as a valid measure for the social, cognitive, and teaching presence. Arbaugh et al.'s (2008) study was extended by Akyol, Garrison, and Ozden's (2009) to both an online and blended learning environment. This latter study analyzed nearly 1000 discussion board postings from the online and blended courses, interviewed student participants, and surveyed students using the Arbaugh et al. (2008) questionnaire. Akyol et al. (2009) found that the course design allowed for the successful development of each CoI element. However, their results are tempered by the small sample size (30 students in both courses).

Researchers during the past decade have focused on each of the various elements of presence within the model. Shea, Hayes, & Vickers (2010), for instance, focused on the teaching presence component of the CoI framework. They felt previous teaching presence research was narrowly focused on discussion threads and not on the entire course design. In their sample of two upper-level online management courses taught by two different instructors, they examined the content of the entire course including such items as class discussion boards, small-group discussion boards, individual student/faculty communications, and assignment instructions. The results indicated teaching presence occurs throughout the entire course not such threaded discussion areas. For example, both instructor's participated heavily in the initial discussion threads and then declined throughout the remainder of the course. One instructor maintained some level of discussion board participation throughout the course, but one instructor's participation dropped to zero. By considering the entire course design for evidence of teaching presence, this instructor demonstrated more teaching presence activity in areas outside the discussion board threads. This wider view of online teaching presence demonstrates the individual teaching style of online instructors.

CONCLUSION

As OLL becomes a greater option for post-secondary business education, faculty will need a pedagogical model to guide their online course design. The CoI model with its focus on presence - social, cognitive, teaching - may be the pedagogical framework for online educators. For example, researchers have developed a rubric for scholarly guidance and a template for online course designers (Garrison, 2011). Recent studies suggest course designers can achieve presence by focusing on the entire course design, not just threaded discussions (Shea et al., 2010). Other research supports the CoI framework is applicable in blended learning environments (Akyol et al., 2009; Arbaugh et al., 2008). The development of a validated questionnaire expands the opportunities for research across institutions and disciplines (Arbaugh et al., 2008; Garrison et al., 2004).

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EFFECTIVENESS OF ACTIVE LEARNING ENVIRONMENT: SHOULD TESTING METHODS BE MODIFIED?

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ABSTRACT

It is often reported in the literature that a collaborative leaning environment is a more effective learning environment for students. However, there is less emphasis in the literature on testing and assessment mechanisms when classes are taught using different collaborative learning techniques. Should testing methods remain the same while classroom environment has changed? This research examines the effectiveness of the collaborative learning environment in the classroom along with the testing methodologies.

To test the effectiveness of the collaborative learning environment, we have designed and used three different teaching environments in a particular course over three different semesters. In each successive semester a more collaborative classroom environment was created for a selected course. The first semester classroom environment (baseline) was the traditional lecture format. The next semester, a modified classroom environment was used. This was designed to be a more interactive environment with focus on problem solving and extra time for classroom discussions. Instructor-to-student and content-to-student interaction was emphasized. Student–to-student interaction was encouraged as well. In the following semester, course delivery was based on a hybrid environment. Students were given Tablet PCs to produce a more interactive class. The collaborative environment was created based on the InkSurvey Tool from the Colorado School of Mines (2008). This environment provided an active and collaborative learning environment in a hybrid format (face-to-face with on-line features/components). This environment allowed the multi-faceted student interactions using Tablet-PCs along the active learning environment created on the previous semester.

To test the learning, we used two different methods each semester. First, independent classroom observations were made. During these observations, both, frequency and quality of students' interactions were recorded. Second, we used traditional assessments and recorded the students' grades. The results show that as the classroom environment becomes more interactive, the classroom quality of interactions increases and students have better understanding of the subject matter. However, students' performance in traditional examination does not improve at the same rate with higher level of collaborative environment. This research shows that while changing the classroom environment, testing methods and tools must also change accordingly to reflect the full effect of the collaborative learning.

INTRODUCTION

There is a plethora of research to indicate that active learning environments improve students' learning (Bransford, Brown, & Cocking, 1999; Hu, Kuh, & Li, 2008; Kuh, et al., 2005). However, there are vast differences in the active learning environment based on its design, implementation, extent of the active learning component in the material delivered, and the measurement of outcomes. Most researchers are concentrating on the variety of active learning tools and mechanism of making didactic elements more interactive. Fortunately with advancement in the digital classroom technologies and increased availability of these technologies, creating more active classroom environments is becoming easier. Furthermore, use of personal information technology tools like laptops, cell phones, PDAs, ipods, ipads, etc. is increasing rapidly; and the younger generation is more comfortable in utilizing these information technology tools. These technology tools can help to engage students in the classroom thus providing opportunities to create a variety of active learning environments.

However, it is not sufficient to simply change the classroom environment. With the changed environment, other classroom tasks must also be changed. These tasks include delivery of material, classroom management, testing/measurement, etc. Assuming that every plan of the active classroom teaching requires necessary changes in delivery mechanism, it still leaves one major element of the active learning puzzle untended—the outcome measurement.

The research related to the measurement of active learning environment outcomes should start with the applicability of the testing methods to active learning environment. Testing methods designed for traditional lecture-based classroom may not be the right tool to assess the learning outcomes in the changed environment. It is unclear from research that measuring tools created for the traditional classroom environment can be transferred directly to the active learning classroom. Does old fashion paper-pencil examination, which served traditional classroom well, fit as an effective outcome measurement mechanism for the active learning environment? Should student performance be measured just based on the test scores? How will one measure "the increased understanding of fundamentals or better problem solving skills" based on old paper-pencil test? What value should be allocated to the enriched classroom participation? How classroom participation should be differentiated and recorded? This is further complicated by the fact that different subject matters may require different outcome measurement techniques based on the assigned value given to the classroom discussion. Despite a lot of work in the area related to the active/collaborative learning environment, less emphasis is placed on the measurement techniques. This shows that there is a need for more research in the area of assessment of the active/collaborative learning environment. In this research we propose to operationalize the construct of active/collaborative learning by using technology tools. Furthermore, we propose to use several different outcome measurements methods to test their effectiveness. One of the objectives of this research is to show that the outcome measurement methods need to be revised if the classroom environment is changed to active/collaborative learning environment.

PROBLEM STATEMENT AND HYPOTHESES

It is clear from the literature that the active learning environment is better for students in many different subject matters. However, it is not clear as to how one should measure the outcome of active learning and show the improvement achieved in the students' learning. Traditional testing mechanism may not capture all different aspects of the learning taking place in the active learning environment classrooms. This research has two major objectives to address this research gap. First objective is to measure effectiveness of the active learning environment in a computer information system curriculum class. The second objective is to measure the adequacy of the three outcome measurement tools in the active learning environment.

To test the validity of the construct, three hypotheses were developed. These hypotheses are as follows:

H1: The student performance in the test improves as the learning environment becomes more and more active.

H2: The frequency of student participation in the class improves as the learning environment becomes more and more active.

H3: The quality of student participation in the class improves as the learning environment becomes more and more active.

METHODOLOGY

To carry out the testing of the above listed hypotheses, a field experiment was designed. It is a quasi-experiment scenario where samples for the pretest and posttest are not same. The experiment was designed to run a senior level course, MIS 410: Information Systems Analysis and Design at the Norfolk State University, Virginia. This experiment ran for three semesters using three distinct teaching environments. Each successive environment was more interactive and collaborative than the previous one. To remove the effect of instructor, same instructor taught this class for three different semesters. Same text-book was used and identical course material was taught during each of the three semesters. Correspondingly to remove the effect of the testing, similar examinations with comparable questions were used in all three semesters. Based on the experience from past teaching, it was assumed that students in each semester were of the same basic knowledge and academic caliber. Furthermore, entering GPAs of these three groups of students were not statistically different.

Baseline

In this environment no active learning treatment is applied in the classroom, i.e., the selected course was taught in traditional lecture format. If students' asked questions, those were answered by the instructor or other students; otherwise students were mainly involved in taking notes. This became the baseline study.

Three different measurements were recorded: test score improvements, frequency of questions and quality of questions. Test score improvements were recorded based on the performance in a traditional multiple choice examination. Since the experiment was carried on a course which had a related prerequisite course, students were expected to have some basic knowledge of the subject matter. An examination based on the MIS 410 content material was created. Students took the same examination both in the beginning as well as at the end of the course. The differential in the end of the course score and beginning of the course score was recorded as improvement for a given student. However, to record both student-to-student interaction and professor-to-student interaction, a separate instrument was designed

A trained independent rater was used to record interactions. The rater unobtrusively captured the interactions on paper, still images, and video clips as they occurred throughout an entire semester in a random fashion. The instructor and rater met several times throughout the semester in order to reach agreement and consensus concerning the various observations collected at random. The same rater was utilized for all observations in order to minimize any variance caused by different rater. The average frequency and quality rating was calculated for each course based on the sample of the classes where observations were made.

Treatment$_1$

In this phase of the experiment, classroom instruction delivery was modified according to the constructivist theory tenets (Jonassen, 1992). These tenets include:

- student controls learning process,
- learning is embedded in complex, problem-based, real-world tasks,
- learning environment is open and flexible,
- assessment is continuous and embedded in learning tasks
- multiple perspectives and social negotiation.

Lectures were de-emphasized. Most notes and extra reading materials were provided prior to each class. Each lecture was mixed with examples, discussions, and group activities. These activities were motivated by real-life based exercises, projects, simulations, and case studies. The classroom environment was more free-flowing compared to the rather "tight-lipped" classroom sessions found in the baseline.

Treatment$_2$

In the last semester, students were issued a stylus-based tablet PC. Students were allowed to employ these tablet PCs to freely explore and interact while actively learning. The InkSurvey Tool software made it possible to share (in real-time) with the entire class a given student's answers to an informal query, formal quiz, or case study problem posed by the instructor. This allowed the entire class a chance to collaboratively learn, while discussing the merits of the student's work. The software functionality also allowed faculty members a chance to assess (on real-time basis) the level of understanding being achieved by the given individual,

the thought process followed by the student, as well as the entire class. The InkSurvey Tool software (http://ticc.mines.edu) is accessed as a shareware system under approved conditions by the School of Mines at Colorado (Kowalski, Kowalski, & Hover, 2007). All of the technologies used in the class allowed the instructors the possibility to create an interactive assurance of learning networked environment with active and collaborative/cooperative student learning and real-time assessment capabilities (IAOLNE). These modifications in the course delivery were made while maintaining most of the elements of modified lecture format, real-life problem, project, and simulations, used in $Treatment_1$.

Each of these environments was applied in three successive semesters. These were designed in such a way that each classroom environment was more interactive compared to the previous semester. The baseline was the least interactive and $treatment_2$ was the most interactive environment.

CONCLUSIONS

The following conclusions can be drawn from this research:

a. The value of interactive environment is not captured by all performance measuring instruments.

b. Increased student interaction and its quality can't be captured using traditional testing methods.

c. Not all student performance measurements work in every classroom environment. That is, with classroom environment modifications, performance measuring mechanisms must change accordingly.

d. Active and collaborative/cooperative learning environments improve students' performance if properly measured.

e. Different testing and assessment methods must be used for the different classroom environments.

It was noted that there was a dramatic increase in the engagement level of students by instructor as classroom environments were changed each semester. The combination of constructivist-based modifications to the instructional delivery plus the utilization of the tablet PCs within the InkSurvey Tool environment have made it possible to create a learner-centered, knowledge-centered community of inquiry where students are actively engaged in pursuing knowledge. This pursuit of understanding occurs within well-defined "knowledge paths" designed by the instructor. Students query the instructor, as well as each other, challenging the theoretical frameworks or models presented. This is an expression of higher order and critical thinking occurring in the classroom. The InkSurvey Tool creates an environment which facilitates formative assessment and more importantly, allows the instructor as well as the students a chance to peek into the thought process behind the answers given by their peers, and to challenge them. In conclusion, effort in collaborative/active learning improves students' understanding.

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Provided upon request.

COLLEGE STUDENTS' TEXTING HABIT AND THEIR ACADEMIC PERFORMANCE

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ABSTRACT

This study utilizes data from undergraduate students to test what factors influence student grade point averages. The study analyzes how often students texted in class, and if they are feeling engaged by professors in class. To further understand the students' use of cellular devices and social media, we also analyzed student "stressors", as well as their "social life". A regression analysis was used to further gather details about the data. The results of this study suggest that social websites like Facebook have become a relaxing mechanism for many college students. It also suggests that the students who do text in class are not feeling engaged by professors, but it is not negatively affecting their GPA's.

INTRODUCTION

The controversial issue of students utilizing technology in the classroom has raised many questions over the past decade. In recent years, many researchers have felt that student grade point averages have decreased due to frequent technology use; such as Facebook, text messaging in the classroom, and internet usage while studying. Smart phones, and internet usage, have become an everyday part of many college students lives. The focus of this research was to discover what factors influence student grade point averages and why these factors are so prominent. This study looks to see if different variables outside of the classroom, have effected student GPA's. We looked to see if how often students texted in class, and if they are feeling engaged by professors in class. To further understand the students' use of cellular devices and social media, we also analyzed student "stressors", as well as their "social life". A regression analysis was used to further gather details about the data. The results of this study suggest that social websites like Facebook have become a relaxing mechanism for many college students. It also suggests that the students who do text in class are not feeling engaged by professors, but it is not negatively effecting their GPA's.

LITERATURE REVIEW

The review of prior theory and research in this area of study can be organized into many different areas. The first area that should be fully understood is the ability to multitask among different generations. In an article titled, "Multitasking across generations: Multitasking choices and difficulty ratings in three generations of Americans" written by L. Mark Carriera, , Nancy A. Cheeverb, , Larry D. Rosena, , Sandra Beniteza, and Jennifer Changa, it is suggested that different generations have different abilities to multitask. This study investigated whether changes in the technological/social environment in the United States over time have resulted in

changes in the multitasking skills of younger generations. It is discovered that the "Net Generation" (i.e. - the current college generation) has a higher ability to multitask than Generation X and Generation X has a higher ability to multitask than the Baby Boomer Generation. Although it has been proven that current college students are more inclined to multitask, it is important to know why they can effectively multitask.

According to the article "Training Improves Multitasking Performance by Increasing the Speed of Information Processing in Human Prefrontal Cortex", written by Paul E. Dux, Michael N. Tombu, Stephenie Harrison, Baxter P. Rogers, Frank Tong, and René Marois, it is suggested that our task performance is debilitated when a person attempts to do one or more tasks at a time, unless they are trained over time to multitask. Certain generations, like the "Net Generation" have been "trained" to multitask since childhood. Watching television while playing with blocks, to listening to music while doing homework, has all played an integral part in "training" the brain to process information efficiently and effectively. It is suggested that the prefrontal cortex can be trained to process information more quickly, and allow people to efficiently multitask. This ability to "train" the brain plays a large part in explaining why students feel as if they can effectively text message in the classroom, or use social media while listening to a lecture. Based on the above ideology, the following hypotheses are being proposed:

Hypothesis 1: Current college students have the capacity to multi-task more efficiently and receive higher GPA's.

Hypothesis 2: Practicing, or "training" the brain can effectively and efficiently allow students to receive higher GPA's.

Students in the current generation believe that by multitasking (i.e.- texting in the classroom, using social media while doing homework etc) is in fact utilizing time more effectively, but research has indicated that this "multitasking" is harmful to the GPA. By definition, "multitasking" means: "The handling of more than one task at the same time by a single person" (Webster), but many research conducted by neurologists have indicated that multitasking impedes the brains ability to retrieve and process information effectively.

In an article titled "The effect of multitasking on the grade performance of business students", written by Yvonne Ellis, Bobbie Daniels and Andres Jaugui, it is suggested that student multitasking negatively effects student GPA's. In their study, one half of the students were permitted to text in the classroom, while the other half was not. After empirically studying a group of students, it is revealed that the students who "multitasked" in the classroom performed much worse than the students who were engaged in the classroom. The conclusion from this study indicates that students who text in the classroom are in fact distracted and cannot effectively multitask.

In another article titled "When Goals Collide: The Interaction between Prospective Memory and Task Switching", written by Robert West, Ashley J Scolaro, and Kira Bailey, they discovered that in order for information to be retained, the prospective memory is dependent upon the retrieval of the information. According to the article, there are two different types of motivation; The first motivation called "trait motivation" is defined as "a person's motivation to

learn". The second motivation, "state motivation", is defined as "a person's motivation to remain engaged". For college students, their "trait motivation" or willingness to learn is very high, but once a cellular device or computer is available, the students "state motivation" or engagement, becomes very low. If a person is multitasking, their initial memory of a situation is distracted, thus negatively affecting their prospective memory. This task switching is affecting the prospective memory of students, thus affecting learning because of dependency on retrieval.
Thus, the following hypothesis is being proposed:

Hypothesis 3: Students who text in the classroom cannot effectively multitask because the brain cannot effectively retrieve and process information.

Students are not the only ones accountable for the use of technology in the classroom. Although many educators believe that technology is the main distracter for students, often times, the different teaching methods play a role in students motivation to remain engaged. Many professors are utilizing techniques in the classroom that may not be suitable for all students. Constant, monotonous lecturing disengages students, which may be the reason students feel the need to text message in the classroom, browse the internet on their smart phones, or just entirely disengage.

In an article titled, "Students Silent Messages: Can teacher Verbal and Non Verbal Immediacy moderate student use of text messaging in the class?" by Fang-Yi Flora and Wei; Y. Ken Wang studied the effects of different engagements by students, and if the professors are the ones to blame for students disengagement. The article studies the differences between trait motivation, or the eagerness to learn, versus the state motivation, or actual engagement. This article analyzes the different professor approaches in the classroom, and indicates how immediacy (verbal and non verbal) can reduce texting. It also indicates that texting leads to disengagement, BUT, has become a habitual (i.e.- addiction) for college students. This study of student engagement indicates that there is a negative correlation between students who are not engaged in the classroom, and their GPA's.

An instructional behavior that can be used in the classroom is "immediacy". (FY Wei) By definition, "Immediacy Behaviors are verbal and nonverbal cues that enhance affinity and closeness in communication" (McCroskey and Richmond, 1992). Verbal immediacy refers to the act of calling students by their names, asking for student feedback during the lecture, using collective pronouns, and engaging in conversations with students before and after class. (Gorham, 1988: Rocca, 2007) Non- Verbal immediacy refers to the use of movement, eye contact, facial expression, gesture, time and vocal expressiveness to arouse student's attention and interest during class. (FY. F Wei). Thus, we propose another hypothesis:

Hypothesis 4: When professors integrate both verbal and non verbal immediacy in the classroom, students will be more engaged and will receive higher GPA's

Although many professionals believe that students have become "addicted" to technology, perhaps there is an underlying reason as to why students feel the need to constantly

engage in social media/text messaging. In an article titled "Dimensions of College Student Stress", authors Peter Villanova and David A. Bownas explore what factors contribute to college student stress levels. One of the results that they discovered was that idea that college students typically experience "relocation" and or "lifestyle" stress; whether it be due to moving far from home, or commuting and balancing the work schedule. Another contemporary stressor for students is the feeling of "isolation" or "loneliness". The pressure from financial concerns, as well as the intense need to succeed also adversely affects students sleeping patterns. For students, social networks as well as cellular devices provide them with a connection to the lifestyle they left. Utilizing the internet and receiving text messages from friends alleviate students, even if it is only momentarily, from the stress that frequently consumes them. This understanding of student stressors leads us to propose another hypothesis:

Hypothesis 5: Students engage in social media, as well as text messaging, to alleviate daily stressors.

Quite a few studies have indicated that allowing cellular devices in the classroom are proven to improve student engagement as well as performance. In an article titled, "Using short message service to encourage interactivity in the classroom", written by C. Marketta, I. Arnedillo Sáncheza, S. Weberb and B. Tangneya, it is suggested that the use of cellular devices, and texting in the classroom is proven beneficial to students. The reason for this is due to the fact that the students utilize their cellular devices as a "break" for the brain. It allows the student to take a moment to relax, before absorbing more information.

Another article written by Max Gold studied the positive effects of texting in the classroom. In an article titled, "The Positive effects of Texting in the Classroom", Max Gold discovered that by allowing texting in the classroom, students will feel more engaged, and more obligated to participate. If the students have the use of the internet on their cellular devices, they can research the topic of the classroom and have a better idea of what the teacher is learning. Although many educators consider texting to be a major distraction, and diminishing to vocabulary, communication skills, and writing skills, others consider texting to be as valid of a teaching tool as the overhead projector. He also discovered that texting in class not only has a positive effect in the classroom, contrary to what teachers previously thought, but it also has a positive effect on a child's ability to write lengthier papers and has made their writing skills stronger in general. When students are able to use their cell phones in class, they can use the internet to look up information, and it also reduces the anxiety level in the classroom. Therefore, the following hypothesis is being proposed:

Hypothesis 6: Allowing technology in the classroom will not deter students from learning, but rather, it will allow students to feel more comfortable and receive higher GPA's.

BRIEF DISCUSSION OF RESULTS:

We have collected data from about 200 students from a Catholic undergraduate college in upstate New York. We looked into the data regarding students' use of text messages and other demographic variables and analyzed the data. A stepwise probit analysis is done. We found the following results:

a. Number of hours in a week a student studies is positively significant to dependant variable "GPA": This means, more one studies, higher the GPA gets)
b. number of hours a week one goes to the internet to do research (as percentage of total internet use) is negatively significant to GPA
c. number of hours a week one goes to internet to do FB activity (as percentage of total internet use) is negatively significant to GPA
d. "Agree to do FB activity before study" positively significant to GPA
e. "Agree to go to Internet only for academic activity" positively significant to GPA
f. "Update my status while studying": positively significant to GPA
g. # texts received per day: Positively affects GPA (Perhaps just reading the text received and not replying is positive)
h: # texts sent per day: Negatively affects GPA (perhaps sending takes more involvement)
i: Text in class: positively significant to GPA. (may be the current generation is more adept to multi-tasking). Neurologists say, our brain is more capable than what we use it for.
j: Professor enthusiasm about the material: negatively significant to GPA .
k: Gets bored in class: Negatively significant to GPA (seems intuitive).
l: Drinks over HW: negatively significant to GPA (seems intuitive)
m: Cope with stress by going to FB: Negatively significant to GPA (rest of "coping" variables are non significant): This is a strong result
n: gender: women had less GPA than males.

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