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The Journal of Learning in Higher Education.

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Transforming Technically-Oriented IT Courses into Writing-Enhanced Courses

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ABSTRACT

To write effectively is an important skill for business students. In traditionally non-technical business classes, writing is emphasized through case analyses, term projects, marketing reports, or management reports, just to name a few. However, because technically-oriented courses in areas such as MIS usually focus on students' problem-solving abilities, writing has often been ignored. In this paper, we introduce a general approach to transform technically-oriented courses into writing-enhanced ones. We contend that, by creating writing-enhanced assignments and projects, developing grading rubrics for writing, and frequently giving feedback to students about their writing, instructors can assist business students in technically-oriented courses to increase their awareness of the importance of writing and improve the effectiveness of their writing. The findings and implications of the study are discussed.

Introduction

After surveying the faculty and students and conducting several university-wide forums, the steering committee responsible for putting together the Quality Enhancement Plan (QEP) for our Southern Association of Colleges and Schools (SACS) accreditation recommended writing as the focus and entitled the plan "Writing the Solution: Steps toward Developing Competent and Professional Student Writers" (Loughman, Hickson, & Sheeks, 2008). As the title suggests, the plan was designed to concentrate on two main areas or levels of student writing: the "competent" writer during the first two years of study, and the "professional" writer during the final two years during which time students would be expected to take courses primarily related to their majors. From a developmental standpoint, the focus first on competence was intended to develop essential writing skills appropriate to all students, regardless of major; the focus on professional writing was intended to build on student writing competence, to develop skills for particular majors, to generate in students an awareness of what professionals use for a model when preparing documents (Nellermoe, Weirich, & Reinstein, 1999, p. 54).

As constituted, the QEP established at our university fits into the larger construct of not only Writing Across the Curriculum (WAC), as described by several researchers (Magnatto & Stout, 1992; Farris, & Smith, 1992; McLeod, & Miraglia, 2001), but also Writing in the Disciplines (WID) (Beard, 2007; Sundberg 2006; Moore, 1994). From the perspective of learning outcomes at the "competent" level, the university's goals are to improve the quality of students' writing and to enhance their learning through their writing. When writing is seen as a product of the classroom environment, teachers have similar expectations: compliance with specific instructions, relevance to course material, and use of standard written English. Thus, there is a general agreement about the standards for assessing writing at the competent level in core or general education courses. Traditionally, the English depart-

ment has been responsible for providing writing instruction that meets these general standards.

Faculty in various disciplines, however, have different expectations for their students' writing. What a biology professor expects to see in a lab report or research project can be quite different from what the English instructor expects in a critical paper required for a first-year composition class. In this context, "each academic discipline is driven by its own specialized procedures, conventions, and terminology in an interactive process between writing and learning" (Sipple, 1989, p. 447). It is necessary for professors in the disciplines to take ownership of writing instruction so that their students can adhere to the conventions of the discipline and thereby begin to understand "the relationship between writing ...and what it means to become members of that discipline's intellectual community" (Farris & Smith, p. 72).

In this paper, the authors describe their attempts to bring the "professional" writer component of the Quality Enhancement Plan into courses that typically do not rely upon student writing. As recent research suggests (Merhout, Benamati, Rajkumar, Anderson, & Marado, 2008), focusing on writing is one method through which instructors can develop both indirect and direct methods of assessment and to generate deeper awareness about course goals and student performance in the MIS curriculum, one of the focal points of the current study.

Research Hypotheses

Technically-oriented business courses such as Management Information Systems (MIS) major-specific classes normally focus on students' problem-solving skills, and writing has not often been emphasized. In this study, we introduce an approach to transform those technically-oriented courses into writing-enhanced ones. We propose that, by creating writing-enhanced assignments and projects, developing grading rubrics for writing, and frequently giving feedback to students about their writing, instructors can assist business students to both increase their awareness of the importance of writing and improve the effectiveness of their writing. The hypotheses of this study include:

H1. By transforming a technically-oriented class into a writing-enhanced one, the students' favorable perception of the importance of writing will increase.

H2. By transforming a technically-oriented class into a writing-enhanced one, the students' writing effectiveness will be improved.

Research Methodology

To test the research hypotheses, we used surveys to gather data about student perceptions and analyses of student writing to assess potential improvements. The study participants were drawn from two upper level MIS courses. Both classes were technically-oriented and were taught by the same instructor using a similar teaching style. The participants from one class were used as a control group: the importance of writing was mentioned in class periodically, but no other writing enhancement approaches were applied. The participants from the other class were used as the treatment group in which several writing enhancement approaches were applied.

The study was conducted during a regular academic semester. A pre-study survey and a post-study survey were administered at the beginning and end of the semester, respectively, to measure students' awareness of the importance of writing. This awareness is measured by students' perception of the importance of writing in their career, in the completion of their degrees, and in the classes they are taking. The survey questions use a five-point Likert scale with anchors ranging from 1 to 5, "least important" to "most important." Data about the potential mediating factors such as classification of students, gender, GPA and job status, were also gathered in the surveys. Both the pre-study and post-study surveys were anonymous to ensure that students could freely express their opinions.

For the treatment group, writing-enhanced assignments and projects were assigned to the students throughout the academic semester.

The grades for those assignments were partially based on writing components. Customized grading rubrics and writing samples were distributed along with the assignments. The grading rubrics mainly focus on four writing components of the reports: content, organization, style, and grammar/usage/punctuation. The evaluation criteria were clearly laid out. One sample grading rubric used in the pilot study is attached as Appendix 1. The students also received feedback on their writing from the instructor. Students' writing samples were chosen from assignments at the beginning and end of the semester and used as pre-study and post-study writing samples. The quality of the pre-study and post-study writing samples were compared.

Research Results

Twenty-eight students participated in the survey: 12 were in the treatment group and 16 were in the control group. The demographic variables for both groups were similar. For both groups, over 70% of participants were seniors; over 65% were male; over 80% were between 20-25 years of age; nearly 60% held a job outside of the classroom.

Students' Perception of the Importance of Writing

The students' perceptions of the importance of writing are listed in Table 1. As the findings indicate, the participants from both the control group and the treatment group did not recognize the importance of writing in the pre-study survey, especially in their current class (3.08 out of 5 and 3.62 out of 5, respectively). This further validates the importance of this study.

For both control group and treatment group, the participants rated the importance of writing higher in the post-study survey than in the pre-study survey. This is expected for the treatment group, but not for the control group. To further analyze this, we conducted a t-test comparing the participants' individual responses in the pre-study and post-study surveys (see Table 1). For the treatment group, while there is no significant difference in terms of participants' perception of the importance of writing in their career (P = 0.32), the participants' opinions of the importance of writing in the completion of their business degree and in the current class are significantly different, (P = 0.07 and P = 0.08, respectively). For the control group, however, the participants' responses in the pre- and post-study were not statistically different for all three measures even through the values from the post-study are generally higher than the values from the pre-study.

We noticed that the participants from the control group generally rated the importance of writing higher than the participants in the treatment group. We then compared the individual responses using a t-test (assuming unequal variances, α=0.1, one-tail). No significant difference was found between the two groups. The p values for "importance of writing in career", "importance of writing in completion of business degree" and "importance of writing in current course" are 0.1, 0.2, and 0.1 respectively.

Table 1
Students' Perceptions of the Importance of Writing

	Treatment Group			Control Group		
Students' Perception of Writing	Pre-study	Post-study	t-test	Pre-study	Post-study	t-test
Importance of writing in career	3.92	4.08	0.32	4.38	4.67	0.12
Importance of writing in completion of a business degree	3.92	4.42	0.07	4.19	4.50	0.11
Importance of writing in current class	3.08	3.67	0.08	3.62	4.10	0.11
Average	3.64	4.06	NA	4.06	4.42	NA

Note: 1). The value is the average of all responses: 1 – least important, 5 – most important. 2). T-test: Two-sample assuming unequal variances, α=0.1, one-tail. The p value is shown.

In summary, the participants' ratings from both the control and treatment groups on the importance of writing in the post-study survey are generally higher than their ratings in the pre-study survey. For the control group, this is probably because completion of the survey could increase the awareness of the importance of writing. However, the increase between the post- and pre-study isn't statistically different. For the treatment group, the participants' responses in the post-study survey are significantly different from the responses in the pre-study survey in two of three items measuring their perception of the importance of writing. Thus, the students' favorable perceptions about the importance of writing increased after implementation of a writing-enhanced class. Hypothesis 1 is supported.

Quality of the Students' Writing

The student writing samples were drawn from the treatment group. We used a writing-enhanced, three-phase project in which students were required to submit a report for each phase. Report 1 was due at the middle of the semester, report 2 was due a few weeks later, and report 3 was due at the end of the semester. For all reports, part of the grade came from the quality of the writing. Students were recommended to use the instructor-supplied grading rubric and sample report when they wrote their reports. They were also advised to use outside help such as the university's writing center, if necessary. The instructor directly commented on writing components in the students' reports.

The average ratings for students' writings are shown in Table 2. The quality of the students' writing improved within the eight-week period, especially in the "style" and "grammar/usage/punctuation" categories. In general, while almost every report 1 submitted in the middle of the semester contained some grammar errors, inappropriately used words, etc, in report 3 those issues were greatly controlled.

Based on the post-study survey illustrated in table 3, all participants except one frequently used the grading rubrics to guide their writing. The results also show grading rubrics and instructor feedback greatly helped students to improve their writings. The participants also seem to be satisfied with in-class help on writing: based on the post study survey, only 25 % of students used the university writing center to help their writing project during the study period.

By participating in a writing-enhanced project and being provided grading rubrics and instructor feedback, students significantly improved their writing. Hypothesis 2 is supported.

Table 2
Participants' Writing Sample Grades

	Report		
	1	2	3
Average Grade	7.25	8.5	9

Note: the total points for the writings are 10.

Table 3
Participants' Feedback on Writing Enhancement Approaches

Items	Result
Use of grading rubrics for project	11 (yes) 1 (no)
Usefulness of grading rubrics (average)	4.42 out of 5
Usefulness of instructor feedback (average)	5 out of 5

Note: 1- least useful, 5 - most useful

Conclusion and Discussion

Writing is an important skill for business students and should be consistently emphasized in the business curriculum. However, the importance of writing has not typically been appreciated by the students in technically-oriented MIS courses, nor have MIS faculty typically delivered writing-enhanced courses. In this paper, we present a general approach to transforming a technically-oriented MIS class into a writing-enhanced one. We used surveys to gather data about student perceptions and analyses of student writing to assess potential improvements. The participants were divided into a control group and a treatment group to effectively evaluate the proposed research approach. The results show that embedding writing requirements into class assignments, providing rubrics on writing, and providing feedback on writing can improve the quality of students' writing and increase students' awareness of, and satisfaction with, the importance of writing.

There are a couple of limitations to this study. First, the sample size is relatively small which makes the statistical conclusion difficult to draw. We are planning to replicate the study across several semesters to increase the sample size. Second, the study was conducted on two different classes, even though they are both technically-oriented courses and taught by the same instructor with similar style. The research findings could be stronger if the control group and treatment group were from the same class.

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APPENDIX 1
MISM 4135 DATABASE DESIGN PROJECT
REPORT 1 RUBRIC

Components	Evaluation Criteria and Point Values			Points
	Exceeds Expectations (10)	**Meets Expectations (6)**	**Does Not Meet Expectations (2)**	
Content/ Required Components: 1. Title page, 2. Overview of the project, 3. Requirement analysis, 4. Initial design	Document content fulfills all report requirements to a high degree of accomplishment.	Document content fulfills most report requirements to a moderate degree of accomplishment.	Document fulfills few of the report's content requirements.	
Organization	Document follows format exactly; sentences are arranged for maximum impact; most ideas/concepts are presented in a coherent, logical order.	Document follows format to a moderate degree; sentences generally are arranged for impact; some ideas/concepts are presented in a coherent, logical order.	Document generally does not follow format; sentences usually are not arranged for maximum impact; few ideas/concepts are presented in a coherent, logical order.	
Style	Words used in most instances are appropriate to the purpose of the assignment; most sentences display structural competence; tone of the document is in most instances appropriate to the assignment or audience level – (i.e., professional)	Words generally are appropriate to the purpose of the assignment; sentences generally display structural competence; tone of the document is generally appropriate to the assignment or audience level.	Words used are generally not appropriate to the purpose of the assignment; few sentences display structural competence; tone of the document is generally not appropriate to the assignment or audience level.	
Grammar/ Usage/ Punctuation	Document is nearly error free and shows a high degree of competence in the use of grammar and punctuation.	Document displays few errors and generally shows competence in grammar and punctuation.	Document contains several errors and shows a low degree of competence in the use of grammar and punctuation.	

The Quest for Achieving Excellence in Teaching Marketing to Undergraduates: The Teaching and Learning Context (TLC) Model

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ABSTRACT

This article presents The Teaching and Learning Context (TLC) Model to provide a macro frame of reference for the quest of achieving excellence in teaching marketing to undergraduates. In a complementary and integrating manner, the (TLC) Model implicitly reflects the processes and variables of the teaching and learning experiences specified by many richly endowed micro models. The component makeup and directional flow of the (TLC) Model is provided with substantial credence through its capacity to orchestrate harmony between previously considered competitive teaching and learning opinions, propositions and theories. Although presented within the context of teaching to undergraduate marketing students, when in the process of self-reflection and continuous improvement, the (TLC) model can be a valuable aid to those in all disciplines with a sincere commitment to achieving excellence in teaching and learning.

Introduction

There is an obvious desire by marketing educators to achieve excellence in teaching marketing to undergraduates. One measure of proof of this desire is the ever expanding litany of advisories by master teachers and others on the latest best teaching and learning methods (Braun 2004; Camey and Williams 2004; Conant, Smart and Kelley 1988; Davis, Misra and Auken 2000; Eriksson and Hauer 2004; Fairhurst and Good 1993; Faranda and Clarke 2004; Karns 2005; Kelley, Conant and Smart 1991; Leong 2005; Lilly and Tippins 2002; Morrison, Sweeney and Heffernan 2003; Pearce and Jackson 2006; Roy and Macchiette 2005; Sautter, Gagnon and Mohr 2007; Smith 2003; Tomkovick 2004). Added to this wonderful plethora are the very important contributions made by scholars writing with a specific focus in technologies (James and Burke 2006; Neo and Neo 2004), pedagogies (Auster and Wylie 2006; Becker-Olsen 2000: Ulrich 2005), physical surroundings (Gonzalez et al 2004; Tiburcio and Finch 2005), and the motivation of students (Desai, Damewood, and Jones 2001; Hansen 2003; Gonzalez, et al 2004; Young 2005; Smith 2004).

Although each of the above mentioned advisories individually offers a valuable stream of insight that flows into a reservoir of understanding, the desire to achieve teaching excellence would suggest the need for a macro frame of reference. In purpose, the Teaching and Learning Context (TLC) Model presented within this article is put forth as such a frame of reference. More specifically, the TLC model was developed to provide a simple platform for the quest of achieving teaching excellence and incorporates the synergistic interrelationship between the above noted advisories.

Within this article, this purpose will be pursued by: 1) Describing the methodology employed in developing the (TLC) model and 2) Demonstrating through description, explanation and discussion of (TLC) variables how the model provides a frame of reference when addressing the challenges of achieving teaching excellence.

Methodology

Being a conceptual piece, the methodology employed in this article is a synthesis similar to what was used in conceptualizing the Creative Marketing Breakthrough Model (Titus 2007), the Professor Principles (Lantos 1997) and Factors Affecting Media Selection: A Conceptual Framework (Strauss and Frost 1999). More specifically, the synthesis consists of reviewing the marketing literature, feedback from undergraduate marketing students, marketing alumni and marketing faculty colleagues, and the personal experiences/observations of two demographically diverse teachers who have taught a combined total of twenty different undergraduate marketing courses during sixty-three years of teaching in higher education, to over seventeen thousand students. In addition, while not initially chronicled, a number of other factors had an impact and should be noted:

1. Courses were taught at five different categories of institutions; a private two year Junior College, a small Liberal Arts College which until recently offered no advance degrees, a medium size Business College which offers an MBA and a number of certificate programs, a medium size Liberal Arts State college with a limited number of Masters and Doctorial degrees and a very large State University which offers multiple Masters and Doctorial degrees.

2. Courses were taught to both traditional day students, evening adult learners and off campus distance learners.

3. Courses were taught at various times of the year (fall, spring, summer and special winter sessions) and every day of the week excluding Sunday.

4. The semester course-teaching load ranged from a high of (7) to a low of (1).

5. Semester course preparations ranged from a high of (4) to a low of (1).

6. Enrollment per class ranged from a high of (120) to a low of (1).

The Teaching and Learning Context (TLC) Model

What follows are a description, explanation and discussion of a model, which can be employed across disciplines as a simple platform for the quest of achieving teaching excellence. Admittedly, no claim is made that the (TLC) model is a panacea or the Rosetta Stone of educational models. With that in mind, the authors do submit that when uniquely operationalized by a teacher, through their individual teaching style, the (TLC) model can serve to promote the type of learning to which teaching excellence ascribes.

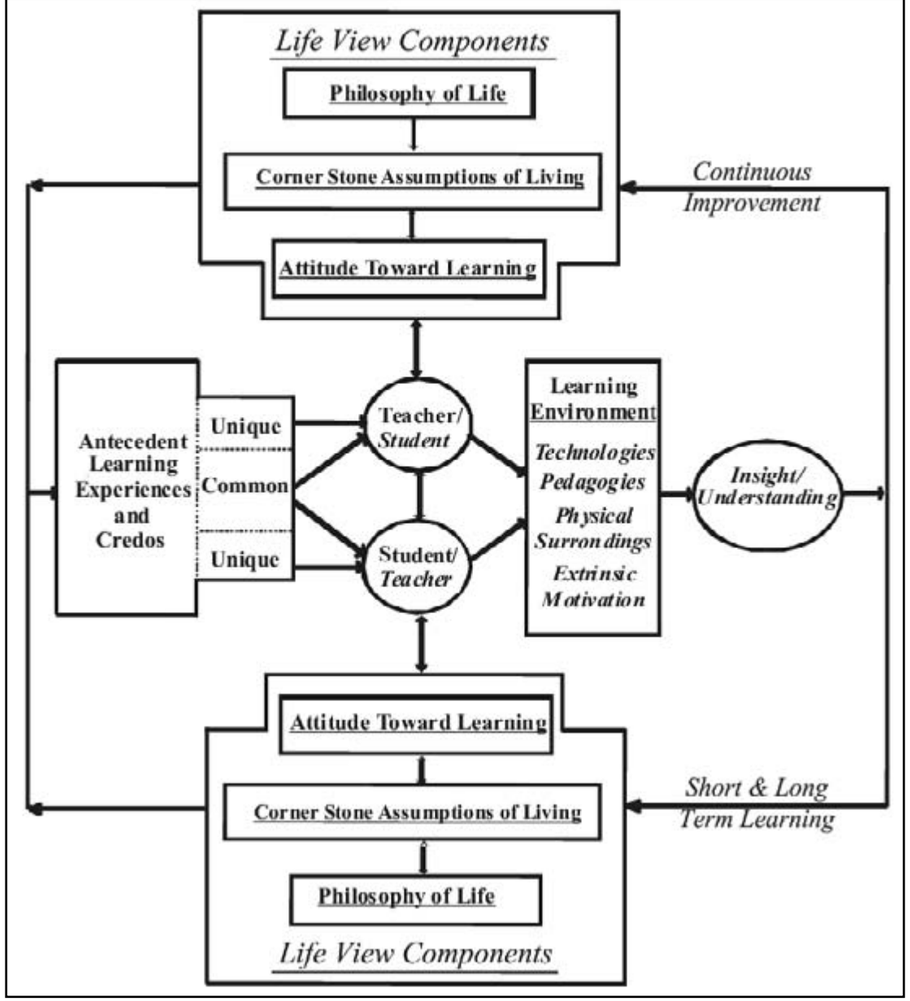
TLC Model Assumptions

Two major underlying assumptions of the (TLC) Model are: 1) that those striving for teaching excellence pursue continuous improvement (Auster and Wylie 2006; Conant, Smart and Kelley 1988; Paladino, 2008) and 2) that those striving for teaching excellence have a genuine love for the discipline, the students and teaching (Tomkovick 2004). According to Auster and Wylie (2006, p. 343), "Continuous improvement is the fourth dimension of the teaching process that is essential to creating active learning in the classroom", and "The input for continuous improvement is feedback from the students." When describing the importance of creating an interactive and responsive teaching environment to inspire learning Paladino (2008, p.185) exclaims, "I am passionate about marketing and education."

TLC Model Description

As seen in Figure (1), both the teachers' and students' learning experiences are broadly impacted by the three general life view components included in the model; their respective Philosophy

Figure 1
Teaching and Learning Context (TLC) Model



of Life, Cornerstone Assumptions of Living, and Attitude Toward Learning. While unique to each individual they also impact one another. These lead to and are implicitly influenced by the unique and common Antecedent Experiences and Credos for both the teachers and students. These then directly impact the Learning Environment, which includes technologies, pedagogies, physical surroundings and extrinsic motivation. The resulting insights and understanding then lead directly back to the above mentioned three general components. Thus, the continuous improvement process is repeated with each additional class and course. Obviously, the TLC model is a continuous dynamic process model because the insights and understanding continu-

ously flow back to both the teachers and students for future use.

Explanation and Discussion of the TLC Model

The (TLC) Model implicitly reflects, in a complementary and integrating manner, the processes and variables of the teaching and learning experiences specified by many richly endowed micro models i.e. Four Dimensions of Teaching Process (Auster and Wylie 2006), Experiential Learning Theory (Kolb 1984), Doing-being Continuum (Ramsey and Fitzgibbons 2005), The Creative Marketing Breakthrough Model (Titus 2007), and the Integrated Teaching Model (Whetten and Clark 1996). Thus, the component make-up and directional flow of the (TLC) Model is provided with substantial credence through its capacity to orchestrate harmony between previously considered competitive teaching and learning opinions, propositions and theories. In the relativist tradition, the (TLC) Model represents a fundamentally straightforward contingent and recursive frame of reference, which rests on the GATORE Principle – knowledge is context-relative unless refuted in testimony by God And Ten Other Reputable Entities (Carr 2008).

Student and Teacher

At the center of the model appropriately reside the student and teacher who can perhaps periodically appear to be indistinguishable, particularly when viewed in a class of adult learners. This is essentially "the Being Mode": "If we are not learners, we cannot help others to learn" (Ramsey and Fitzgibbons 2005, p. 345). Both the teacher and students bring with them his or her respectively unique life view components of a Philosophy of Life, Cornerstone Assumptions of Living and Attitude Toward Learning. Examples (both unique and common to the authors) of the (TLC) Life View Components are: 1) Philosophy of Life: Love is all you need; The true meaning of life is beyond human comprehension, but the process of living is a guiding beacon, 2) Cornerstone Assumptions of Living: Enjoy the moment; Everyone should be treated, as you would want to be treated, 3) Attitude Toward Learning: Learning must be fun; Applied learning is paramount. These three components serve to provide the initial base for the intrinsic motivation engaged during the first new teaching and learning encounter (first class). Because of the dynamic nature of the process, this initial state of motivation is influenced by each additional teaching and learning encounter (subsequent classes and courses). One might think of the teacher acting as a theatrical director or a sports coach with the goal of maximizing the full potential of a body of talented students. To achieve this goal**,** it is essential that the teacher exhibit a personal image of love for the students, teaching and the discipline (Tomkovick 2004). According to Conant, Smart, and Kelly (1988, p.13), *"Students know if you care. They know if you want to be in the classroom."*

Antecedent Learning Experiences and Credos

The three previously noted life view components contribute to a pool of Antecedent Learning Experiences and Credos, which represent the second major variable within the (TLC) model. Neither the teacher nor any one individual student is cognizant of the pool's totality but each has his or her own unique set and those shared in common. Exhibit (1) is presented as a small sample (experienced and formulated by the authors) to exemplify what may materialize as Antecedent Learning Experiences and Credos during a marketing course. Clearly, the more seasoned teacher will be better prepared to deal with these antecedent elements as they surface. According to Wheeler and McLeod (2002, p.714): *"Innovation and creativity in our day-to-day teaching are the ultimate outcomes from being self-confident in our ability to respond to in-the-moment events."* But rest assured, even the most seasoned teacher should plan to be confronted by something unique from students, i.e. the "undiscussables" (Baker 2004). Therefore, as a personal and salient attribute, the cultivation of "Cognitive flexibility" (Titus, 2007) would prove to be an enormous benefit where the situation requires a creative type of response.

Exhibit 1
Examples of
Antecedent Experiences & Credos

Example Experiences:

1. Standing at the back of a class for five minutes until another teacher realizes they were in the right room, but at the wrong time lecturing to the wrong students.

2. A student, cloaking his insecurity with intellectual arrogance, asked early during the first class—what qualifies you to teach the subject matter of the course?

3. Recognizing that one's sexual orientation is independent of teaching and learning.

4. Giving an exam and noticing that a student had become frozen, in a catatonic state thankfully not dead.

5. Learning the three best measures of effective teaching are:
   a. pre—the demand by students for a teacher's elective course offerings;
   b. concurrent—the honest evaluation given by students at the end of a course;
   c. post—unsolicited recommendations and testimonies from previous students, their family and friends years later.
6. The joy resulting from successful class presentations by disabled students.

7. Being informed that a student died four hours after taking your final exam.

8. Realizing that some of the most fruitful teaching and learning experiences occur when the teacher and students become indistinguishable as a result of their respectful and mutually beneficial unscripted exchanges.

Example Credos:

1. There are few reasons and no excuses for learning to be anything but fun.

2. Students can never give a wrong answer but periodically they do provide an ill conceived response because of a deficient contextual understanding.

3. Anything someone can originate you can comprehend.

4. A teacher can give up the lead in a class without relinquishing leadership.

5. And it is still true, no matter how old you are—when you go out into the world, it is best to hold hands and stick together (Fulghum 2003).

6. In order to take something into consideration it must first be acknowledged.

7. Ignorance is an appropriate point of departure and a foolish destination of choice.

8. Knowledge is relative because nothing has a meaning without a context.

9. "Physics envy" need not shackle those who study the behavioral sciences (Bennis and O'Toole (2005).

For example, one of the most pervasive and potentially crippling antecedent experience issues raised by students is their expectation of ultimately being guided by a teacher to precise and uniform processes to follow for success. Chonko (2007, p.119) very accurately articulates this issue *"... the teacher thus is placed on a pedestal as an omniscient individual, exerting authority and being a repository of a knowledge."* This particular expectation specifically stands at odds with and is ultimately addressed by the (TLC) Model's relativist goal of establishing an applied context-driven base of insight and understanding. This form of insight and understanding is essentially "Capability" as defined within the Learning pro-

cess hierarchy (Bleimann 2004) and as discussed by Ng (2006).

Learning Environment

The third major (TLC) Model variable, the Learning Environment, is composed of four active elements: adopted pedagogies; available technologies; physical surroundings; and the extrinsic motivation. With regard to pedagogies, technologies, and physical surroundings**,** a teacher will be cognizant of their individual quality levels and their varying synergistic potentials (Dickson and Segars 1999; Jones, Johnson and Bentley 2004; Ng 2006; Ramsey and Fitzgibbons 2005; Randeree 2006). As such, the authors' previous teaching and learning experiences would suggest that distributing a set of mimeograph handouts, in a first floor converted room within a functioning factory building - *with its occasional ceiling drippings*, equipped with a portable green board, would commence from a lower initial teaching and learning potential than the computerized display of internet materials, in a 21st century "state-of-the-art" and functionally designed classroom. While the latter would be preferred, a teacher understands that such a high quality mix of elements stand as only sufficient and not necessary conditions for promoting the desired richness of long-term learning and teaching excellence.

Within the learning environment it is the salient level of students' intrinsic motivation that stands as the true necessary condition for long-term learning. It should not be surprising to find that motivation plays such a central role (Klein, Noe and Wang 2006). According to Faranda and Clark (2004, p.280) *"Universally, the respondents in this study indicated that the professors who best motivated them also had the greatest success in facilitating their learning of class material."*

Armed with this contextual understanding, when the teacher first steps across the classroom threshold they will attempt to ignite the students' intrinsic motivation to learn with some tested and proven extrinsic motivational techniques. This may be achieved by operationalizing anyone or more of a number of best methods, such as addressing each student by their name (Desai, Damewood, and Jones 2001 p. 141), the Voeks Method of timely, active and personalized outlining of material from course readings (Hansen 2003), building social capital (Gonzalez, et al 2004 p.4), the "PROFESSOR Principles" (Lantos 1997), "Talk Show" (Paladino 2008), a social cognitive framework for self regulated learning (Young 2005), the ten anchor points for teaching marketing principles (Tomkovick 2004) and the "Marketing You Project (Smith 2004). Given the use of these or comparable best methods, teaching marketing to undergraduates becomes a process where in a student's intrinsic motivation to learn is engaged by the forces within the learning environment as orchestrated by and acting in concert with a teacher who honestly and confidently embraces and expresses a true identity.

Insight/Understanding

The final major (TLC) variable is the context-relative insight and understanding generated through the learning environment. While by design the (TLC) model indicates that students and teachers both accrue long-term insight and understanding, identifying and measuring it has been a universal challenge. Given the intense focus on outcomes assessment (Miller and Seay 1991) and assurance of learning (Zhu and Mac Farland 2005), the Herculean importance of developing accurate measures of student long-term learning cannot be overstated. Attempts at addressing this state of importance have produced an enormous wealth of short-term learning measures (Bacon 2003; Smith 2004; Graham, Graham and Whiting 1997**).** In addition, individual courses (Diamond, Koernig and Zafar 2008) and outcome-based marketing curriculum (Borin, Metcalf and Tietje 2008) have been purposefully designed and structured in an effort to infer the establishment of long-term learning. Unfortunately, empirically generated evidence of long-term learning by undergraduate marketing students has proven to be much more elusive. As a result, it is suggested that perhaps, marketing teachers pursuing excellence in teaching marketing to undergraduates should put forth, in mass, their personal anecdotal experiences and conversations with alum as surrogate evidence. The ten testimonies presented in Exhibit (2) represent a small sample of correspondence with alumni

the authors have experience over the years which serve as surrogate evidence of the (TLC) Model's long-term learning impact.

The long-term insights and understanding gained by teachers can be more easily identified than what has been captured by students. From semester to semester and year to year the changes a teacher engineers in the composition of the courses he or she teaches serves as evidence of their long-term learning. Exhibit (3) is put forth by the authors as a sample of successful assignments that they personally continue to refine as a result of the insight and understanding acquired through their learning environment experiences.

Due to the dynamic nature of marketing, the four active learning environment elements of available technologies; adopted pedagogies; physical surroundings: and the extrinsic motivation require constant updating if one pursues excellence in teaching. Examining the potential benefits of using a first-letter acronym to increase unaided recall (Saber and Johnson 2008), the effectiveness of PowerPoint based lecture (Burke, Ahmadi and James 2009), the methodological advantage of netnography for connecting in megaclasses (O'Reilly et al., 2007), and the mundane decision of selecting the optimal class length meeting time (Reardon et al., 2008) are but a few examples. Just seven years ago YouTube and other video sharing sites did not exist and now are an effective tool in the learning environment and their adoption by a number of those who are pursuing excellence in teaching marketing to undergraduates epitomizes an actual materialization of long-term learning.

Exhibit 2
Ten Testimonies to the TLC Model's Long-Term Learning Impact

- How are you? I hope you don't mind a blast from the past. I thought of you this week. I explained the BCG matrix to 4 of my sales people, who looked at me like I had 5 heads. I believe I told someone something to the effect of, "If it turns into a dog, cut it loose." They had no idea what I was talking about, which led to a nice white board-ing exercise. That's applied knowledge. SG Class of (07)

- I don't know if you remember me, but my name is GW and I graduated in 2008. I thoroughly enjoyed your marketing classes, especially Galactic Marketing! I hope all is well! At the Sundance Film Festival in January, I attended a discussion panel on "Physics of Film Making in Space" and met Professor FB. She is one of the leading experts in astrophysical studies and I asked her permission to pass on her contact information to you. So I hope you get some great use out of it!

- I don't know if you remember me, but I took one of your classes in 2002 and it was one of the best classes ever. I always liked your teaching methods, your approaches and your kind personality. Oh yes also that everything has 4 major elements like the - 4 Ps. RR Class of (05)

- You just made learning so easy and fun. What can I say. Although my real passion is writing, and somehow or another I have been managing to do it for the past 3 1/2 years, taking marketing was probably the best elective I could have ever chosen. JL Class of (03)

- I'd like to know how you knew in my Intro to Marketing class over 6 and a half years ago that Lexus was going to come out with an automatic parallel parking feature. I know that concepts for cars are released three years ahead of time or more...did you read something somewhere?...Probably not, you must just be Yoda. KM 2007 Class of (03)

- I often think of you because some 16 or 17 years after I had the good fortune to enter your classroom and I am still using the marketing principles and Consumer Behavior information you taught. JP Class of (89).

- Your lecture tonight made my week, and its only Monday! I am currently building prototypes for two of my three patents which I've developed since last winter and this past spring. Your lecture on types of new products was enormously beneficial. SH Class of (07).

- During the past twenty five years I have put to good use the "Planning Premise" you taught me in Marketing Principles when I was freshman. It has been the baseline assumption for most of the reports and presentations I have developed over my career. TB Class of (81)

- I am the marketing researcher for a small firm and I'm viewed as the cat's meow. Little do they know that my research background is a result of your fun approach to teaching and thus my learning of marketing principles and marketing research while in your classes. Thank you! CM Class of (79).

TLC Model - Theory Translated into Practice

Justifiably, readers of this article could ask, how specifically would knowledge of the (TLC) Model help us to be better teachers and how can we utilize the model? The success achieved by the authors through their use of the Model characterizes the type of validity suggested by William F. Massy (1974):

Exhibit 3
Teacher-Adopted Experiential Learning Assignments

1. **Career Interviews** Assign each student to conduct an informational interview with a currently practicing marketing professional and present the results of their interview to the class. The students must independently locate and contact the professional and conduct the interview by phone or in person in order to make a personal connection.

2. **Marketing Principles Team Case Research, Analysis and Presentation** Assign teams of three to five students to research and analyze a "real world" case from any Marketing Principles text. The research must go beyond the case as written and include information about the entire marketing environment. Team presentations must include a bibliography, be interesting and informative and involve the entire class.

3. **Advertising Principles Team Project** Assign teams of three to six students to "invent" a new product and create a complete Integrated Marketing Communications (IMC) plan for that product. This IMC plan assignment is modeled after the American Advertising Federation's National Collegiate Competition. The team "pitches" their IMC plan to the class and hands in their plans book. This project can become part of the students' "book of work" for job interviews.

4. **Futurist Paper and Presentation** Within a Galactic Marketing course, each student is required to write a paper and make a presentation on any topic of their choice. The topic must relate to marketing and outer space over the next fifty years, with benchmarks of 10, 25 and 50 years. The assignment serves to build self-confidence by demonstrating how one's vested autonomy can eliminate the crippling paralysis of ambiguity and also elevate one's status to the level of topic expert in the eyes of others.

> "The validity of a model is hard to determine, even where clear objectives have been established. One way of meeting this problem is to say that a model which is believed by management is a "valid" model. There is more than a grain of truth to this assertion, as belief is the prerequisite to use of a model, and use is the hallmark of success." (p. 2-523)

In addition, Exhibit (4), a (TLC) Planning Grid provides a pragmatic example of a specific application of the model. In this particular case, an abbreviated perspective of the continuous improvement attribute of the (TLC) Model is captured within the context of the methodology

Exhibit 4
TLC Planning Grid

TLC Model Applied: A Marketing Principles Class
Example of Methodology and Synergy with Existing Teaching Theories

	Recently Completed Semester	Upcoming Semester
TLC Model	**Input to Original Approach**	**Input Following Continuous Improvement Changes**
Life View Components	▸ Life is to short to learn what can't be used so live every moment by using fully all that you have learned while having fun. ▸ Don't be selfish, share life, living and learning with others.	▸ Don't be selfish, share life, living and learning with others. ▸ "The Humbuggery of Bullshit... (Mott-Stenerso, 2005) ▸ Servant Teachership (Chonkp, 2007)
Antecedent Learning Experiences & Credos	▸ Expanding Our Teaching Effectiveness: Understanding Our Responses to "In-The-Moment" Classroom Events (Wheeler & McLeod, 2002) ▸ Seizing The Moment: Talking About the "Undiscussables" (Baker, 2004) ▸ Negate imposition from helicopter parents.	▸ Seizing the Moment: Talking about the "Undiscussables" (Baker, 2004) ▸ Exploring Cramming... (McIntyre & Munson, 2008) ▸ Now it's Personal... (Granitz, et. al., 2009) ▸ Negate imposition from helicopter parents.
Students & Teacher	▸ Seven Principles for Good Practice in Undergraduate (Chickering & Gamson, 1987) ▸ Professor Method (Lantos, 1997) ▸ Be a Good Teacher and Be Seen as a Good Teacher (Desai, et. al, 2001)	▸ Professor Method (Lantos, 1997) ▸ Ten Anchor Points for Teaching Priciples of Marketing (Tomkovick, 2004) ▸ Being in the Classroom (Ramsey & Fitzgibbons, 2005) ▸ Improving Student's Interest in Learning...)Leong, 2005)
Learning Environment	▸ Selecting Instructional Techonology Media... (Strauss & Frost 1999) ▸ Redefining the High-Technology Classroom (Dickson & Segars, 1999) ▸ The Case for Using Live Cases... (Kennedy, et. al. 2001) ▸ Using the Voeks Methods to Improve Student Learning (Hansen, 2003) ▸ Social Capital... (Gonzales, et. al. 2004) ▸ Powerful or Pointless... (James, et. al., 2006)	▸ Selecting Instructional Techonology Media... (Strauss & Frost 1999) ▸ Using the Voeks Methods to Improve Student Learning (Hansen, 2003) ▸ Social Capital... (Gonzales, et. el., 2004) ▸ The Reflective Learning Continuum...)Peltier, et. al., 2005) ▸ The Motivational Effects of Classroom Envirements... (Young, 2005) ▸ Effectiveness of Power Point Lectures... (Burke, et. al., 2009)

of teaching a principles of marketing course from one semester to the next. The example is used to demonstrate the synergy between the (TLC) model and other teaching and learning opinions, propositions and theories. The five (TLC) components occupy the first column while the next two columns are occupied by the most recently completed semester and the upcoming semester respectively. The rows highlight what was/is planned and considered with regard to each (TLC) component. As a result, the (TLC) Planning Grid allows the teacher to monitor the elements of continuous improvement planned from one semester to the next.

The (TLC) Planning Grid could also be adopted by those involved in team teaching as a means of documenting agreement on the structuring of course content (concepts to be taught and methodologies employed) and areas of individual teaching responsibility. In this case, the second two columns would represent what both team members have agreed to as course content with each column representing a teacher's designated responsibility for coverage. More columns can be added in order to accommodate teams with a membership greater than two. In addition, both of these applications can serve to complement course syllabi as input to accreditation and reaccreditation documentation of actions taken to promote learning and continuous improvement.

Conclusion

The (TLC) model provides a frame of reference for the quest of achieving excellence in teaching and learning. This model acknowledges the importance of selecting and synergistically blending the best teaching methods and the critical importance of displaying a genuine love of the discipline, the students, and teaching.

The authors have found that effective use of the (TLC) model requires that, when in the process of continuous improvement, one must engage in a high level of honest self- reflection. As such, before and after each semester the authors discuss the model with each other and find this to be a valuable motivational and confidence building exercise. In addition, during each semester, joint discussion are initiated after a particularly "good or bad" classroom experiences. But, it should not be implied that these examples are the only prescription for success. On the contrary, one of the core concepts of the (TLC) model is to recognize that each teacher's uniqueness serves as one of two primary underlying drivers for the effective and practical use of the model.

Pursuing critical feedback from students stands as the second primary driver. Attaining critical student feedback is more easily "said than done" and thus could be considered an obvious limitation when applying the model. Indeed, the literature suggests that seeking and acting on feedback from students is a vital but as of yet a neglected aspect of the teaching process (Auster and Wylie 2006, p. 343). Therefore, future research in this area within the context of the (TLC) model could prove to be of enormous value.

In conclusion, the quest for achieving excellence in teaching marketing to undergraduates is a very desirable and admirable goal. As has been illustrated throughout this article, the Teaching and Learning Context (TLC) Model can be of value to those with a sincere commitment to achieving teaching excellence through the process of continuous improvement, when it is employed as a diagnostic and/or prognostic basic frame of reference. Suffice it to say, the (TLC) Model can serve to seamlessly and synergistically link in a complementary manner many richly endowed teaching and learning micro models. When uniquely operationalized by a teacher, through their individual teaching style, the (TLC) model can serve to promote the type of learning to which teaching excellence ascribes.

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College Students and Service Learning: Guys Do It, Too!

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ABSTRACT

Service Learning is a trend sweeping all educational levels, especially in colleges and universities. Service Learning provides a "real world" experience component tied to a class or course, thus enriching the classroom experience by making classroom curriculum relevant.

The purpose of this paper is to examine the effects of service learning on two sets of students at a public university in the southeast. The college students visited two different facilities; both facilities serve students who have at least one or more at-risk characteristics. At both facilities, the students mentored and assisted with homework. This mentoring process is a vehicle for raising the aspirations of the student identified as at-risk. The mentors in this case were all male.

One college course included twelve male students, all of whom were members of the college football team, and enrolled in a First Year Initiative course. They volunteered at a local facility serving kindergarten through fifth grade students in an after-school program. Their goal was to make a connection to the community by becoming part of the community. The long-range goal was to mentor students and encourage them to stay in school. The course curriculum reflected the underpinnings of this partnership.

The second college course included fourteen pre-service teachers enrolled in a Secondary Social Studies methods course within their last semester of course-work before the student teaching semester. These males modeled the importance of education to students in sixth through twelfth grades at an after-school program. Additionally, they were able to build rapport with students and see first-hand the difference that their efforts made to thirty students.

This paper shares the procedures, challenges, and successes of these two Service Learning experiences for twenty-six male college students as they mentored at-risk students. Additionally, data from the community partners were summarized to get the full impact of the project.

Introduction

According to Kaye, (2004), "service learning can be defined as a teaching method where guided or classroom learning is deepened through service to others in a process that provides structured time for reflection on the service experience and demonstration of the skills and knowledge acquired" (p. 7).

Service Learning is a concept that is becoming increasingly popular on high school and college campuses, and has roots going back to John Dewey (1938). Service learning meets the needs of both the student and the community by providing students an opportunity to put action to their book learning while reaching goals for the learner and society.

Service learning differs from community service in that a service component ties directly to a class. This service component ends up being beneficial to both the students and the receiver of the service. For example, college students build their own character while working with younger students, and provide experiences that help them build character. Many students provide community service and provide assistance to agencies and their recipients. However, service learning is more than community service.

Literature Review

A Service Learning Faculty Manual was created at Colorado State University. The Office for Service Learning and Volunteer Programs (SLVP) reviewed the advantages of service learning for all involved parties: students, faculty, community, and the academic institution. They found that students gain real-life career experiences through community involvement while being engaged in service learning. Faculties recognize community issues and challenges. Community members gain access to university facilities and members. Academic institutions build community partnerships. Thus, the service learning project is beneficial to all involved (http://writing.colostate.edu/guides/teaching/service_learning/particben.cfm).

Accordingly, Weber (1998) states that "It is my belief that an effective teacher education program must begin with the personal ethical/moral development of the prospective teacher and, further, that the college or university bears responsibility for fostering such development in all of its students" (Weber, 1998, p. 86). He suggests that a character education element be built into the university students' method courses that include a service learning component. Weber suggested a five-phase procedure to integrate all aspects. These phases include: 1) Define character education and select student performance objectives. 2) Select character education elements to be the focus. 3) Combine character education topics with college course curriculum. 4) Select assessment tools, and assess the teaching. 5) Create a plan to include new elements.

"Students in service learning courses represent a source of quality mentors for youth," stated Hughes & Dykstra (2008). Their research explored relationships between university student mentors and high-poverty student mentees. They found that the college mentors rated "learning to be a positive role model" as a very important benefit, as was "gain an understanding of the experience of a different cultural group." Mentees ranked "having a consistent, caring adult to interact with" as a very important benefit, as well as "build a friendship with a mentor" (Hughes & Dykstra, 2008). Dubois, Holloway, Valentine, and Cooper (2002), found that many students benefit from mentoring, especially students who are at risk due to low socioeconomic levels.

Similarly, Muscott and O'Brien (1999) conducted a research study where high school and college students provided mentoring to thirty-two elementary students with behavioral and learning disabilities. They taught character education programs to the elementary students, most of whom were middle to low socioeconomic status. The mentors examined the relationships formed through the mentoring process and found several benefits to the mentees: elementary students who were treated with respect were more successful; elementary students appreciated them as role models; and they were able to build relationships between the groups, which enabled them to provide corrective feedback. The elementary students stated they were pleased with the program because it provided fun, teamwork, learning, and friendship.

Likewise, college students enrolled in a Physical Education course with a service learning component taught at-risk high school students in a project described by Kahan (1998). The alternative high school serves students aged 17-21 who quit school and have returned to earn their diploma. The school does not have physical education facilities nor does it offer a physical education class. Therefore, the college students supply the entire physical education program taught on the college campus. This program consisted of eleven lessons, 45 minutes long, over a six week period. Class work began with basic skills and progressed to competition. The students chose handball as the team sport to build team skills. One college student (Kris) stated, "At first, I didn't know how we'd get along together; it was kind of scary and I felt there was a lot of distance. But after just a couple of meeting, it all started kicking in and we all got along very well" (Kahan, p. 49). The faculty member/service learning instructor provided guidance to college students and gathered data to make the project stronger. The high school students found the program beneficial. "I'm not used to that – I've never played any sports before so now I'm more team-oriented than I was before and I've learned how to better work with other people, how to be a teammate rather than just an individual" (Kahan, p. 48). The academic institution was able to promote community partnerships by allowing the high school students to come to the college campus to use the physical education facilities.

A precursor to service learning, community service has long been in place on high school and college campuses. Beckman (1997) stated several ways that community service could be added to existing courses to make the courses stronger. Her ideas are indeed useful in creating effective service learning courses, and include motivating learners, building stronger citizens, promoting higher level thinking, providing reflection on personal values, enhancing coursework, creating non-traditional pedagogy opportunities, providing students contact with the community, and offering contact with diverse populations.

Further, Beckman (1997) brought another idea to be examined for service learning. She reviewed Women's Ways of Knowing: The Development of Self, Voice, and Mind (Belenky, Clinchy, Goldberger, & Tarule, 1986). This document explored the perspectives through which women gain knowledge and how those beliefs create empathetic, compassionate personalities. Traditionally, males are often taught to be strong and be tough, while females are taught to be kind and caring. The authors compared and contrasted the gender – related expectations. Beckman believes that males involved in service learning will have the opportunity to become more empathetic and compassionate while dealing with students from the community in a closely connected classroom situation.

First Year Initiative Students

Implementation

During the fall semester of 2009, students enrolled in the First Year Initiative class at a southeastern university participated in a service learning project. The university students were invited by the agency to visit as often as they would like. The twelve students met twice as a group at an after school facility for elementary school aged children grades K-5 from low socioeconomic backgrounds. After the initial meetings, each student's additional participation varied. The students represented a variety of majors and were freshmen involved with the university football program. The university students' service learning charge was to be a mentor and serve as a role model.

Forty students enrolled in the after-school program with many students on a waiting list. There are requirements for participation in the program. The K-5 students must maintain an appropriate grade level as well as display appropriate behavior.

At the end of the semester, the university students were given several questions to reflect upon based on their experience of working with the elementary students. The questions and responses follow.

Service Learning Student Reflections

1. Describe your service learning placement. What was the setting? What was the type of agency? Who were the recipients of your services (not names, but general category)? How many times did you go to your placement? For how long? What did you do for the service learning project? Without naming them, describe the people with whom you worked. Label or give them pseudonyms. What was their background?

   "The daycare type facility wasn't bad; it was big enough to hold quite a few kids. They even had a kitchen area and bathrooms. I went about 2-3 times for about an hour and a half each time. I worked with the younger kids probably grades K-3. They were less fortunate kids, and going to this after care program was kind of a treat."

   "I went to this place where the kids got dropped off after school. I went there two times for about 1-2 hours each time. I introduced myself to the students and later we went outside and I got to play with the kids. They were young kids and I enjoyed playing with them and getting to know them."

2. What did you learn from the service learning work that you did? About yourself, about the community, about students/children, about teaching, about learning? About service? About diversity?

   "I learned not to take things for granted. I have everything that I need and these kids don't have as much. I liked the fact that they had a place like this for the kids to get some time to enjoy themselves and spend time with other children their age (in a safe place)."

   "I learned that there are very many different types of kids in one community, but no matter how different they are, they all look up to older kids as role models."

3. Describe what you think are the benefits of the service learning that you did. Describe any problems or weaknesses that you observed.

   "The benefits are that the kids had a good time. The problem was that the kids could be somewhat unruly."

   "The benefits are that I got to see smiles on the kids' faces and knowing that I helped make that happen."

   "One problem is that they need to make the building easier to find."

   "Benefits were that we enjoyed seeing the kids and they always had fun when we came. They also looked up to us as positive role models. We told them to stay on top of homework and that sports came second which is a good lesson."

4. After going through the process, define service learning in your own words.

   "To me it means: to volunteer to go play with kids and help make the community a better place to live in."

   "Service learning is providing a service to someone, while at the same time learning the project."

5. How did your perception of service learning change during the semester?

   "When I first heard the word service learning, I thought about helping picking up trash and stuff like that. However, after participating in service learning, I learned that there is more to it—like making kids smile."

   "My perception didn't change, but I enjoyed the experience more each time."

6. What had you hoped to learn? Did you achieve that learning?

   "I just wanted to have fun playing with the kids. However I learned that children really look up to young adults, especially athletes."

   "I hoped to become a better role model for young kids. I somewhat achieved my intended goal."

7. How has your perception of the community changed?

   "When you first see this part of the community you might think that it is a little run down, but after playing with the kids you would think that the community is great."

   "I believe that everybody should do a little something to help out. It made the kids happier and they really wanted to play with us."

   "The project made me realize that there are many different types of kids in this community."

8. How did this experience help you to address the needs of students from diverse backgrounds and abilities?

   "These kids might not have lived in the best places and after spending time with them I learned that they can still have fun no matter where they are from."

   "It just made me better with children in general, but especially children of different ethnicities."

   "It helped me to see that all kids can act different. I have to be accommodating to kids from different backgrounds because their need may vary."

Service Learning Faculty Reflections

The service learning project that my students participated in was enlightening to observe. At first the college athletes were noticeably unsure of themselves and how they would be perceived by the students at the after-school program. After introductions took place, the children broke the ice by asking questions about how many pounds they could lift and what positions they played. Instantly the comfort level of the college students transformed and they were able to relax and enjoy themselves. Each college student had a smile that displayed his joy and satisfaction of making someone happy. The college students did not realize how much the children in the community looked up to them. As our class debriefed following the visits to the after-school facility it was evident that their altruistic behavior has increased. I truly believe that this experience will be something that they will remember as a positive experience. Additionally, it may be the stepping-stone for future experiences they will continue to participate in on their own.

Conversely, one student made this statement:

> "One problem is that they need to make the building easier to find."

I find this statement particularly interesting because the building is located in a housing project and was not necessarily hard to find; however, it is located in an area of town that the college students probably would not frequent.

Service Learning Community Reflections

The Housing Authority primarily serves very low-income families across the county. The director of the facility praised the university students who spent time mentoring the K-5 students. In fact, university students are invited to mentor every semester. He stated that he could not run the program as effectively without the college students' assistance.

Service Learning Academic Institution Reflections

Service learning projects allow university students to provide work force to the agency through mentoring and tutoring elementary students. It speaks well of the university to have students invited to be mentors at an after school facility. Administrators support service learning and en-

courage faculty and students to become involved in projects such as this one.

Social Studies Students

Implementation

In fall 2009, the service learning project for the Social Studies Methods class at a state university in the southeast entered its second year of operation. The class consisted of fourteen young men and four young women—both graduate and undergraduate pre-service education students nearing the completion of their studies in secondary social studies. The reason for interjecting a service learning component into the course revolved around the perceived lack of "real" world experience with students of the age group these young people were going to teach. A community agency requested help with their program. This community agency had designed an after-school program for middle and high school aged students from a poverty background—a safe haven for homework and activities—in a small city in rural West Tennessee. The learning experience needed for the pre-service teachers matched the need for mentors and tutors in the after-school program.

The pre-service teachers were to go to the community center once a week for a six-week period for one hour. They could choose to tutor community students during the period from 3:15 to 4:15 or do mentoring activities with them from 4:15 to 6:00pm. The mentoring consisted of playing a variety of games-- basketball, Wii, ping-pong, board games, etc. While playing with the students the pre-service teacher had a chance to get to know these students and provide a model and perhaps guidance. It was hoped that the middle and high school students would see themselves as possible college students, using the mentors as role models for their futures.

The service learning project was monitored by the university professor and the coordinator of the community center. Feedback about the experience was gathered through classroom discussion on campus and from a reflective paper that the students wrote at the conclusion of their experience (also part of the formal feedback about the experience). Following are the reflection responses from the young male pre-service teachers.

Service Learning Student Reflections

1. Describe your service learning placement. What was the setting? What was the type of agency? Who were the recipients of your services (not names, but general category)? How many times did you go to your placement? For how long? What did you do for the service learning project? Without naming them, describe the people with whom you worked. Label or give them pseudonyms. What was their background?

   "I was placed in the Teen Center located downtown. The center was located in a former youth detention center. The center was administered by the Housing Authority. The Teen Center is in partnership with the United Way. Generally, the kids I worked with were African American kids who came from low-income backgrounds. I went to the center four times for a total of six hours. The first two times I went to the center I tutored and helped kids do their homework.

   On a specific occasion, I helped a high school senior "Joe" complete over 140 economic problems for exam preparation. He later thanked me because he thought he did well on the exam. I also taught a young girl "Jennifer" how to play a basic blues progression on the piano. The last two days I came to the center I brought my saxophone and played some jazz for the kids. "Jennifer" played a blues vamp that I taught her while I improvised. "Jennifer" was a freshman in high school who came from poverty. "Joe" was a very smart kid who was very interested in art and music. He told me he came to the center five days a week to help the younger kids and work on his studies. "Joe's" mom attends college to be an elementary teacher. "Joe" and I talked about what it takes to succeed in college and in life after school. We bonded pretty well and he told me he really enjoyed my sax playing."

   "The agency that I volunteered for was one that allowed kids to come to this place after school to do homework and have a place to go after school to basically try to keep the kids off the streets. The recipients of my services were mostly African American kids that range from middle to high school level. ... While at the Teen Center I would try to help the kids if they needed any help with their homework and hang out with the kids. I played basketball, pool, wii, football, and ping pong with the kids. At first I thought these kids would not care about me coming to hang with them but then you realize that they look forward to you coming to see them."

2. What did you learn from the service learning work that you did? About yourself, about the community, about students/children, about teaching, about learning? About service? About diversity?

   "I learned that if I showed that I was genuinely interested in what they had to say, they opened up and increasingly trusted me even in the short time that I was there. I learned that genuine intent can translate into real relationship building. The kids really picked up on non-verbal things like how you look at them and eye contact. The kids that came from the community seemed typical of small southern towns. Most of the kids were poor and just wanted someone to listen to them. After building trust with the kids, I got a lot more out of it and I'm sure they did too."

   "What I did for the learning service project is to try and learn from the experience and to try and connect with certain individuals to see what their attitude was to certain situations. While I was there I played basketball with numerous boys and during this time I tried to encourage them and to be positive whether they were doing well or not. I tried the best I could with the short time I had to be a mentor and to be a positive influence whether it be a smile, high-five, or giving a compliment."

   "The biggest lesson that I can take from the service learning project is that as a teacher you must always try all means necessary to reach your students. Many times while trying to tutor one of the kids, they would get distracted and lose focus, or others really just were not interested in doing their work. Having to cope with this taught me how big of a virtue patience truly is. The main lesson I learned about myself is that I had never been around students from that background. It was helpful to be around kids from all areas and all socio-economic standings. I learned that service is helpful in teaching lessons in a different approach. It would be hard to understand the backgrounds and techniques needed to teach students from different backgrounds without having experienced it first hand. Diversity took on a new meaning because I had never experienced so much of it."

3. Describe what you think are the benefits of the service learning that you did. Describe any problems or weaknesses that you observed.

   "This service learning opened my eyes to a whole new world. Where I went to school we did not have very many African Americans and at the Teen Center it was 98 percent black kids. A benefit of the Teen Center is that it expanded my thinking and helped me think about diversity more. Some problems that I saw were that these kids really seemed that they do not like working together. It seemed that they constantly had someone to argue with or be smart to. I don't know if it's a bad thing to them or that's just what they do but I see it as a problem."

4. How do you think that service learning is connected with becoming a social studies teacher?

   "Social Studies deals with learning about the community and social interaction. Therefore, doing community service is a

hands-on approach to learning how a community works and interacts while doing positive things. So I think service learning can be a concrete way to teach Social Studies."

"I would have to say it is connected because of the diversity aspect that I experienced while doing the service learning. I now understand what it feels like to be in a situation where I am the minority. This is something I had never felt before and was taken aback by it a bit. I feel that I will be able to relay this message when I teach diversity in my classroom."

5. When you become a teacher, will you have your students participate in service learning projects? Give the reasons for your answer and possible ways that you might use service learning in the classroom.

"Yes, I will have my students participate in service learning projects as long as it pertains to the lesson. So many students seem to get bored with history, it appears to be that they either love it or hate it. By doing a service learning project you can teach the students in a way that they are not used to, it's a different approach that just may catch the eyes of your students. This is also a way to show the children how important it is to be an active citizen in the community and how important volunteer work truly is".

"I think that I will have my students participate in service learning. The reason I feel this way is because service learning is a way for student to experience things that may be different to them. It is important to be out of your comfort zone sometimes. Participating in service learning will help the students realize that sometimes that you need to think of other things rather that yourself. Students could help out at a food pantry for needy families, help at a homeless shelter, volunteer at the humane society, or visit nursing homes. I would want them to do anything that may bring some joy or make someone's life better for a moment while also enriching their lives and making memories they will never forget."

6. After going through the process, define service learning in your own words.

"I would say that service learning is what it is. You provide a service while at the same time you learn something such as about the people you are working with, about what you are doing, or even yourself."

7. How did your perception of service learning change over the last two months?

"When I first was looking at the syllabus on the first day of class I just thought service learning was community service, just something to get through for class, but after doing the service learning my view has changed. Now I believe that service learning that is something that is beneficial for the person involved in it and the receiving service. It was much more than just community service; it was something that benefited me and the community."

8. What had you hoped to learn? Did you achieve that learning?

"I had hoped that I would learn to be understanding of what other student's situations or economic status may be. There have been many times I have judged people by the way they look, their economic status, or if their family is broken. Through this service learning project I do believe that I have come to an understanding of how other people live."

9. How has your perception of the community changed?

"I really never knew our town had that type of area, and I had no idea before that it had a center set up to keep the kids off the street. It was great seeing the town takes an interest in keeping those kids off the streets, and away from drugs and other things that may interfere with them making something of themselves and becoming functioning members of society. "

"My perceptions of the community changed in that I saw more of the real town and not just the college side of the city. I saw the real part of who makes the up the people of this town."

10. How did this experience help you to address the needs of students from diverse backgrounds and abilities?

"This service learning experience taught me the importance of building relationships with students from diverse backgrounds. It also taught me that nonverbal gestures go a long way with many diverse students. Building trust is the ultimate key to helping kids from diverse backgrounds learn in public schools. Ultimately, I think this service learning project was a positive experience because I believe I did some good things for the kids and that is a big part of what teaching is about."

Service Learning Faculty Reflections

As the professor who designed and coordinated the service learning experience for these young men, I had several goals. First, I wanted these pre-service teachers to have exposure to teenagers in an informal setting, to observe their behavior and to get a better understanding of them. Second, I wanted to have these future educators experience relationships with teenagers of a different race and socio-economic group from their own. My college students were all Caucasian. I hoped that the experience would help them learn how to cultivate relationships with their future students in their classrooms. Third, I wanted the potential teachers to serve as role models for the teenagers—to give these middle and high school students a vision of their own potential. From the debriefing sessions in the university classroom and from the reflections of the college students, it is clear that progress was made in understanding the teenage motivation and behavior and those relationships were beginning to flower. Last, I wanted the college students to have hands on experiences, which would be more memorable than any lecture or reading for a college class. From their responses, it is clear that the learning will stay with them long after the class ended.

Service Learning Community Reflections

Feedback from the community partner (Teen Center) was generally positive. The center coordinator noted that the university students were very helpful with homework during the first hour of center time. One student in particular helped a high school student pass the economics exit test. In the future, the university students, in their role as future educators, expressed a desire to be able to tell the center participants to stop doing actions that might be inappropriate. The coordinator agreed that a verbal reprimand might be appropriate under his supervision.

The coordinator also was encouraged by the mentoring portion of the service learning. Several university students made memorable impressions on the teenagers. He also asked that the students spread the time across different days and come in smaller groups. It was decided to schedule the students specifically next year.

The coordinator is very interested in doing the same project next year. He noted that this group behaved in a more professional manner than some of his other volunteers, especially in the way that they dressed.

Service Learning Academic Institution Reflections

In August 2009, this southern university became a member of Campus Compact—an organization formed to promote civic engagement among college students. From this membership, the Institute for Civic Engagement evolved as the center of civic and service activities on campus. Its vision is to provide support in developing concerned citizens through leadership while promoting high standards and zeal for justice. Because of this commitment to civic engagement, service learning is encouraged and rewarded. This particular service learning project received a grant from the Institute because of its design and

community reach. The Institute works with both faculty and community to find matches in need and expertise. The administration of the university has expressed support and commitment to the kind of project that the college students did.

Limitations

The amount of time that college students were available was definitely a limitation. They were challenged in scheduling after school visits at the agencies due to late afternoon and evening classes, football practice, other school-related activities, work, and their own studies. The basic goal for the college students was to gain exposure to the community, and to realize that they can make a difference in the lives of children just by showing up and working with them.

Future Research Recommendations

Both professors agree that there is a need for more structured experiences for the college students. The agency supervisors and professors will meet to outline a more complete plan to benefit both mentors and mentees. A specific area of concern is the amount of authority to give to the mentors, especially when mentees needed correction. The college students noted that the afterschool program differs from the field experiences the university courses maintain. College students felt uncomfortable with allowing language and behavior that would not be acceptable in the school setting. First Year Initiative students will take sports equipment to the facility, teach mentees how to use it, and then leave the equipment at the facility. That gesture will create a common bond between the two groups.

Conclusion

Service learning has benefits for all participants. These projects brought young men, children, and teenagers together in ways to help both partners. The children and teenagers get assistance and role models; the university students widen their understanding of children in poverty and of the need to build relationships with these children. Faculty utilizes service learning to further academic learning that is basic to education. The experience is hands on and memorable. Young men are able develop empathy for others, as is exhibited in the reflections. A key element in teaching is building relationships between teachers and students, and the both mentors and mentees experienced this development. As the students played ball, talked with, and tutored, it became apparent how street wise the agency participants were. Real learning occurred as the college students stepped out of their comfort zones. College students showed leadership skills when modeling appropriate behaviors. Guidance was given in a non-threatening way. Service learning brings college students, faculty, community, academic institutions together in ways that benefit all groups.

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Chinese Financial Development in the American Classroom

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ABSTRACT

This article discusses how to convey a general survey about China's financial development to students in the American classroom. First, we show several photographs of Chinese investment since the 1970s in chronological order, to make visual impressions. Second, we compare stock market data for China and the U.S. in order to help students understand quantitatively. Then we select the Big Four state-owned commercial banks in China as a qualitative case analysis. This article outlines the most significant aspects of China's rapid financial development and the major imbalances in financial growth for presentation to American business students.

Introduction

In recent years, China's rapid financial development has enormously influenced the world. When business school students in the United States learn about the financial systems of the world, they should not ignore China's banking and securities systems. However, from the perspective of teachers, this paper not only discusses how to provide an overview of China's financial development comprehensively, objectively and fairly, but also enables students to understand more easily distinctive features of China's financial development.

The study is organized as follows: Section II reviews China's financial system background. Section III discusses the cultural differences affecting American students' learning from China. Section IV explores pedagogical techniques during the teaching lectures. Section V is the conclusion.

China's Financial System Background

Due to China's financial development and its influence on the world, American students should learn something about China, especially business students at the university. China's total market capitalization of listed companies in the Shanghai and Shenzhen stock markets, a total value of 6.226 trillion dollars at the end of 2007, ranks third in the world.[1]

In terms of individual enterprises, China has the largest company by market value in the world, China National Petroleum Corporation.[2] China is the home to the top two banks in global banking market value, China Industrial and Commercial Bank and China Construction Bank.[3] Although there are several, the following are

1 According to the statistics from CIA: https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html

2 2010-1-27 http://money.163.com/10/0127/02/5U0IQ6V500253B0H.html

3 2010-1-6 www.icbc.com.cn

only two examples of China's ongoing reform: addressing large monopolies' shareholding system reform, including the Big Four state-owned commercial banks' initial public offerings, and the launching of the Small-Medium Enterprise (SME) board and the Growth Enterprise Market (GEM) board. China's financial system is part of an open process and is integrating with the world. We see the continual enhancement of QFII quotas, hot money in China's capital markets playing a more active role, and the possibility of listing multinational companies in China in the future being discussed repeatedly. With this information, American students will have the ability not only to talk about whether the Chinese Yuan (CNY) should appreciate or not, but they will also be able to explain why or why not.

Cultural Differences Affecting American Students' Learning from China

First, from the perspective of demand, Americans do not need to learn too much about other countries. Some American students do not care about China, so they do not want to learn anything. Others are curious, but they know only about a few things made in China. Yet others may know some news about China from Western news media, and they may be aware of the recent rapid growth of the Chinese economy. All in all, because American students live in a developed country with a strong economic foundation and other countries learn from the U.S., there appears to be little demand for understanding other countries.

In contrast, Chinese students have a strong demand to learn from America. Since the United States represents advanced productive forces and the future direction of development, people want to do research about America. Students may directly read original U.S. materials, browse the Western media's English news, and even expend a great amount of time, energy, and money to study in the United States.

Second, language also limits the ability to understand. Almost all of China's students start learning English at least by grade seven. Some start learning English as early as kindergarten. So for Chinese students, reading in English is not much of a problem. On the other hand, Chinese as a language is too difficult for American students, who generally have little interest or opportunity in learning the language. Therefore, language is a barrier for American students' comprehension.

Finally, in order to understand China's financial system, it is necessary to understand China's political system. But the Chinese political system is so difficult that even Chinese people have trouble understanding it. Therefore, it is much more difficult for American students.

Pedagogical Techniques During the Teaching Lectures

First, we recommend using examples to motivate American students' interest. This way, we encourage them to see that the Chinese economy is not irrelevant; on the contrary, China's financial problems can impact everyone's life. For instance, the Business School at The University of South Dakota regularly arranges for its students to study and travel abroad, including going to China. So, when promoting these trips we can discuss the cost with students. Previously, students needed to pay less because at that time, the U.S. dollar was worth more. With the appreciation of the Chinese yuan, they have to pay more. Some in the U.S. have proposed that the yuan should appreciate to improve the U.S. trade deficit. As a student, do you agree with him? Why? We can divide students into different groups for supporting or opposing this policy, and enable them to discuss policy options thoroughly. That way everyone can participate in the discussion. Perhaps it will increase their interests in China's financial issues.

Next, we suggest using comparison and contrasting to describe a simple overview of China's financial status to American students. For example, China has continuously improved the securities market and China is gradually loosening regulation for the banking system. Taking U.S. markets with which students are familiar as a reference, we illuminate the total extent of China's financial development in recent years, which should help students develop a rational understanding. To show the development of the securities markets, we compare the trading volume of China's Shanghai and Shenzhen Stock Exchanges with the New York Stock Exchange. In order to introduce the achievement of the banking system, we can list China's state-owned commercial banks among the world over different years by ranking market capitalization, brand value, credit rating, and so on.

Once more, we use all kinds of pictures to show the history of China's financial development. Since there is a large population in China, imbalance is a typical Chinese characteristic, including in the area of finance.

China's modern financial development began in 1978, which is the first year of China's reform and loosening regulations. Before that year, the financial industry was almost at a standstill, because there were no commercial banks at all. We can demonstrate the progress to American students by using different investment pictures of Chinese common people over those thirty years.

At the end of the 1970s, people saved food tickets as a method of personal investing because they could trade them privately. Actually, urban people used their food tickets in private exchange with rural peasants for eggs or other household items, and thus food tickets became a kind of money, serving both as a medium of exchange and a store of wealth.

In the 1980s, people had to hold treasury bonds (T-bonds) as an investment. At that time, because nearly all Chinese were poor, they had no extra money to invest. China's government forced the urban population to accept T-bonds as a part of their salary, and initially, T-bonds could not be exchanged until their maturity. Later, with liberalization, markets developed for T-bond trade.

In the 1990s, people became interested in the stock market. Sometimes, people queued through the night just to buy actual paper stocks. Then in the 21st century; real estate investment became the Chinese people's preferred investment choice. Consequently, we see housing prices skyrocketing in many cities.

Meanwhile, China's urban and rural differences, and the differences between rich and poor, constantly are increasing. On the one hand, China has bustling cities, such as Beijing and Shanghai. On the other hand, many people are still living around the poverty line in the western parts of China. On the one hand, there are city commercial banks carefully considering the development of financial derivatives to meet the investment needs of the multi-millionaires. On the other hand, there are poor farmers thinking hard about how to get tiny loans from credit unions. Maybe they only need a few hundred dollars to meet production investment requirements in the coming year to maintain their basic living. Since photographs are visual images, they can help students understand better because the images demonstrate shocking contrasts.

Conclusion

As business teachers, we should teach students not only book knowledge, but even more importantly, global contexts. Since we realize that China's financial markets play an important role in the world, we should try our best to convey that to students. As visiting scholars from China and an American native teacher, we have tried to cooperate to find a way for American students to understand and accept the concept of global learning, to achieve the purpose of our teaching. In this paper, we show how to use examples, comparisons and pictures to explain China's financial development. This article is a summary of our attempt. We hope that it will be helpful in the actual teaching of global finance.

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Physical Activity Levels and Percent Body-fat in Higher Education Students

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ABSTRACT

This study examined current physical activity levels and percent body-fat average among college students. Two hundred sixty-six students volunteered to participant for this study from a university in Tennessee. Of the 266 participants, 134 were males and 132 were females. The NASA/Johnson Space Center Physical Activity Rating was used to determine maximum oxygen uptake by self-reported activity levels and a three site skin-fold measurement was used to determined percent body-fat. A negative relationship was found between physical activity and percent body-fat. Thirty-nine percent of females in the study did not participate in enough physical activity to improve physical fitness. Forty-four percent of the females in this study were overweight. This study concluded that students that exercised more had a significant lowered percent body-fat. More research is needed to address the disparity of fitness activity levels and percent body-fat between males and females at the collegiate level.

Introduction

Emulated throughout the world, the American system of higher education has flourished as an institution. Its commitment to the expansion of knowledge and application are suited as a kind of educational enterprise (Duryen, 1973). Colleges and universities in the past existed as classical liberal arts institutions and prepared individuals to become moral, civic, and intellectual public leaders who pursued a professional career (Grubb & Lazerson, 2005). The role of education may have changed throughout history, but the role of educating the whole person has not changed. If the goal of education is to improve students' quality-of-life, prepare them for a fulfilling career, and improve society, the whole student must be addressed. If meeting the total needs of students is the main objective, the success of the institution will be enhanced (Edginton, Davis, & Hensley, 1994).

The importance of educating the whole person including the body is not a new concept. Thousands of years ago, educational leaders understood the importance of educating students regarding their physical selves. Since 2600 BC, individuals in China have believed that diseases were thought to result from organic inactivity. They perform traditional bodily movements combined with breathing exercises to keep the organs functioning, to prolong life, and insure immortality of the soul (Rice, 1926). John Locke, an educator in the 17th century, stated that the aim of education is first, the vigor of the body, second, virtue in soul, and third, knowledge (Rice, 1926). In the past, the Egyptians believed that developing the body improved their society, and the education of most nobility of the 16th century included physical exercises (Imamura, Verhaegon, & Narita, 1977). Francis Bacon stated that a relationship between the good of the mind and the good of the body existed (Imamura, Verhaegon, & Narita, 1977). Plato believed that the mind and the body should be drawn together like two horses harnessed to a coach. The most significant educational manual of the 17th century, developed by Wolf Helmbard von Hohberg of The Courtier Academy, stated that the head of the human body is the soul, but man must not only care for his soul, but also be concerned about the health of his body. The harmony of the body may be accomplished by moderate motion and physical exercise (Imamura, Verhaegen, & Narita, 1977). Socrates believed in the importance of training the body and the mind equally. Dr. Kenneth

Cooper of the Cooper Institute believes that the body, like the mind, must be developed to be a complete human being. Education should not be limited to the mind (Cooper, 1995). How can the mind fully function if the body is sick?

Purpose

The purpose of higher education is to educate the whole person and improve quality of life. It is also viewed as a vital force in society, and the identity of success of the nation is attached to what goes on in the classroom (Karabell, 1998). Though education is sought to bring about a better and satisfying career, its main purpose is to educate and release citizens into society and to improve it (Dolezalek, 2003).

Administrators are concerned with the retention rate, graduation rate, and student satisfaction at the institution (Baird, 2001). Students who are successful academically stay in school longer, have higher graduation rates, and have a higher self-esteem (Yukl, 2002). Physical activity has been proven to increase self-esteem and reduce percent body-fat (Fox, 1999). Sedentary lifestyle has been noted as a primary reason for an increase in percent body-fat which leads to obesity (Sharkey, 2002). Despite the correlation between physical activity at school and obesity later in life, the value of physical activity programs is still being questioned.

Until the mid-1960s, most colleges and universities required physical activity classes for graduation, but by the late 1990s less than one third of institutions with enrollments over 10,000 required these classes (Hensley, 2000). Despite the trend of heightened national interest in physical fitness, physical activity requirements in the United States have been reduced or deleted. Like many other states, the General Assembly of the state of Tennessee requested colleges and university to operate more efficiently due to reduction of financial resources (TBR, 2004). One of the cost-cutting actions was to reduce the number of credit hours required to earn a degree at each institution. General education requirements of physical activity were eliminated to accommodate this cut in credit hours. The benefit of this action reduces cost to the state and students while improving educational attainment and graduation rates (TBR 2004).

Physical activity tends to decline with age between late adolescence and early adulthood (Stephen, Jacobs, & White, 1985). A survey of over 4,609 college undergraduates revealed that only 37.6% exercise for at least 20 minutes three days a week (Sparling & Snow, 2002). Since over half of college students do not meet public health recommendations for vigorous physical activity, there is a strong need to promote physical activity among college students. College and university's physical activities courses may be a last chance to introduce students to a more physical and healthy lifestyle by providing them with a positive learning experience which may help them participate in activity over a lifetime.

Understanding the relationship between physical activity and percent body-fat could encourage administrators to promote healthy lifestyles for students through programs that reduce the obesity rate. The purpose of this study was to determine whether or not there was a relationship between physical activity and percent body-fat. Specifically, the goal was to gain knowledge of the current physical activity level and percent body-fat among college students.

Methods

Design

This study design was correlational research which examines the strength of the relationship of physical activity to percent body-fat. This design was appropriate and employed both a descriptive and inferential statistical analysis to assess the relationship between physical activity and body-fat. The study design included information gathered from one survey, demographics, and skin-fold measurements of volunteer participants. The design's intent was to ensure that, as much as possible, a true picture of the answer to the research question was determined. The inferential statistics included in this design were used to verify the significance of data collected.

Sample

A major public institution of higher learning in the state of Tennessee was selected for the study. The study included a sample of convenience and consisted of 266 volunteer sophomores, juniors and seniors of varied majors. Of the 266 participants, 134 were males and 132 were females. The majority of participants were Caucasians followed by African Americans, six Asian Americans, two Hispanics, one American Indian, and five others. Classification of participants included 97 sophomores, 70 juniors, and 99 seniors all of which started before curricula change in required physical activity courses.

The age range of participants included 156 between 18 and 21 years old, 95 between 22 and 29 years old, 11 between 30 and 39 years old, and 4 between 40 and 50 years old. The greatest number of participants was nursing majors (51) followed by physical education majors (47). The rest were made up of business, recording industry, and education majors.

Instrumentation

Various instruments were used to obtain data. A Subject Consent form was used to explain the role of the participants in the research project along with a demographic form used to obtain personal information including age, ethnicity, gender, school status, and major. Percent body-fat was determined by a three site skin-fold thickness measurement, and maximal oxygen uptake was calculated from the NASA/ Johnson Space Center Physical Activity Rating (PA-R) using the formula of 56.370 - (.289 * Age) - (.552 * "Male %fat") + (1.589 * PA-R) for males and 50.513 - (.289 * Age) - (.552 * Female % fat) + (1.589 * PA-R) for females (Jackson, Blair, Mahar, Wier, Ross, & Stuteville, 1990). Maximum oxygen uptake is measured in milliliters per kilogram of body weight per minute. Participants self-reported the amount of physical activity they performed each week and based on gender, age, and percent body-fat their maximal oxygen uptake was calculated.

Data Collection Procedures

Approval of the research was obtained from the institutional review board. The study was advertised by various professors throughout the university. Announcements were sent via e-mail to all students, displays were placed in residential halls, classrooms, the recreation center, and the library

A screen made out of PVC tubing was built to provide a private area for skin-fold measurements. The screen had one side that measured three feet wide and six feet tall. A white sheet covered the front of the screen. The screen could be broken down quickly for ease of portability.

Each participant read and signed a consent form and completed the NASA Johnson Space Center physical activity rating form. Behind the screen, percent body-fat was determined by measuring skin-fold thickness by using Lange skin-fold calipers. All measurements were made on the right side of the body with the calipers placed one centimeter away from the thumb and finger, halfway between the crest and the base of the folds. The sides were grasped firmly between the thumb and forefinger, pulling the folds away from the muscle tissue. The calipers were held perpendicular to the fold and measured three times. The anatomical sides included the triceps, abdomen, and suprailiac. The three measured sites were added and calculated using separate formulas for females and males (ACSM's Guidelines for Exercise Testing and Prescription, 1995).

Analysis

Descriptive statistics were employed which organized and summarized the data collected. Pearson product-moment correlation coefficient was employed to determine relationship between physical activity and percent body-fat. Fisher's r to z was employed to ascertain level of significance with 95% confidence intervals.

Results

There was a statistically significant negative relationship between physical activity and percent body-fat. The more physical activity performed,

the lower the percent body fat. Participants self-reported the amount of physical activity they performed each week, and based on gender, age and percent body-fat, their maximal oxygen uptake was calculated. Males had a higher average of physical activity than females, but research has shown that males do have higher maximum oxygen uptake (Sharkey, 2002). Females in this study had lower maximal oxygen uptake than the average females based on classification described by Hoeger and Hoeger (2002). Thirty-nine percent of females in this study did not participate in enough physical activity to improve maximal oxygen uptake. However, 61% of females and 100% of males in this study did exercise at least 20 minutes three days a week. This is a higher percentage than current research suggests. Sparling and Snow (2002) stated that only 37% of college students exercise for at least 20 minutes three days a week.

Due to hormones and other physical structure, females naturally have higher percent body-fat (Sharkey, 2002). Females in this study had an average of 25% body fat and the males had 13%. Sharkey (2002) found similar averages of 12 to 15% for males and females averaged 25%. Of the males, only nine were considered overweight based on percent body-fat compared to 59 females. Forty-nine percent of females were overweight which is higher than the 26% that current research suggests (Huang, Harris, Nazir, & Kaur, 2003).

Table 1
Correlation of Variables (n=266)

Variables	R	r^2	p-value
Physical Activity to % Body-fat	-.915	.838	<.0001*

*p<.05

Conclusion

The significant relationship of physical activity to percent body-fat, though widely researched, is important for university faculty and administrators to understand. In this study 49% of females were considered overweight and 39% do not exercise enough to improve cardiovascular fitness. This study did not distinguish between physical activity during class or physical activity on their own. As more universities reduce or eliminate required physical activity courses, fewer students will have the opportunity to be physically active. This reduction of activity could increase the overall obesity rate which would drive healthcare costs up, thus competing with education for dwindling state dollars.

With dwindling funds and the increased cost of tuition, universities and colleges are in direct competition (Shea, 2003). College administrators are held accountable for student retention and seek ways to assist students in becoming successful not only in an academic setting, but also in their future careers (Yukl, 2002). Evaluating the institutions' curriculum to assure that the whole student is being educated and making sure it is based on current research, is the responsibility of faculty as well as administrators.

With current research showing that physical activity levels and percent body-fat affects the health and the future of the student, administrators need to rethink current trends in eliminating their required physical activity classes at institutions of higher learning.

Limitation and Future Research

There are several limitations to the study. This study was limited to data collected from a single semester at one university. Furthermore, a volunteer sample of convenience participated in the study and the researcher relied on self-report for personal information. Since many variables may have affected the outcome of this study and could have resulted in the possibility of misleading results, the reader must not generalize the findings of this study to a broader population of college students and, therefore, should be interpreted with care.

It is recommended that future research be conducted similar to this study by investigating differences in students at a university that requires physical activity courses to a university that does not require those courses. Implications for

institutions should be to research health habits of college students and compare these findings with graduation rates and educational attainment rates. In addition, universities should provide students with sound, scientific information regarding the relationship of daily health habits and overall health, while providing students with appropriate fitness classes based on gender and ethnicity. Finally, universities should provide online students, regardless of major or age, with opportunities to become fit and physically healthy.

Summary

The purpose of this study was to determine the relationship of physical activity to percent body-fat in college students. An added value of this study was used to provide knowledge that can be embraced by educators to enhance curricula with holistic and well-rounded courses that educate the mental and the physical aspect of the student.

The study sample was 266 volunteers which consisted of sophomores, juniors, and seniors of varied majors enrolled in an institution of higher learning in the state of Tennessee. Participants self-reported the amount of physical activity they performed each week. Percent body-fat was calculated based on measuring skin-fold thickness of the tricep, abdomen, and suprailiac. This study concluded that 49% of females were considered overweight and 39% of females did not exercise enough to improve cardiovascular fitness.

Lack of physical exercise increases percent body-fat and leads to obesity. Many universities have reduced or eliminated required physical activity courses. This reduction could increase the overall obesity rate. Increased obesity rates drive healthcare costs up, thus competing with education for dwindling state dollars.

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Rural Adult Online Learning Readiness

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ABSTRACT

The purpose of this paper is to describe the educational needs of rural-based learners within the context of online learning opportunities. This paper's research is based upon a 2007case study particularly focused on establishing a baseline for understanding community online readiness and identifying factors for how rural adults decide whether to participate in online-based learning. The results were the identification of seven interrelated themes that help explain the online readiness behaviors of rural adults in the selected county. The themes are: the Importance of Broadband Internet, the Attraction of Professionals to the Area, the "Missing Generation," Common Solutions and Working Together, Lack of Vision for Online Learning, Changing Cultures and Demographics, State and Local Government's Role and Regulatory Policy. This work focuses on the thematic interrelationships and how an understanding of these interactions might assist other rural communities with online learning readiness.

Background

Adult education professionals are leveraging the Internet at an increasing rate and research indicates an increased usage of the Internet specifically by adult literacy teachers (Wallendorf, 2003). People in rural areas have less access to such services due to cost and availability issues and therefore are encountering an artificial barrier restricting their ability to succeed (Atkinson, 2008). This phenomenon typically referred to as the digital divide (Strover, 2003; Warschauer, 2003) focuses on specifically how to afford low cost, high speed Internet connectivity to rural areas. But assuming that most potential learners have some level of accessibility to high-speed Internet, perhaps a local public library, educators often lack the expertise to effectively implement online learning environments (Borrego, 2010). Simply publishing traditional face-to-face course materials using a content management system like Blackboard® will not guarantee student success. Some research even indicates that success is dependent upon the teacher, the audience, and the methods employed for learning with little regard to the medium utilized (Rice, 2006). While most of this work is based on K-12 education, the relationship between how those students learn while transitioning to adults may be crucial to understanding how to develop online courses in academic settings and perhaps extended to organizational training venues. Snyder (2009) posits that many educators design their online courses using tools in which they are most familiar. Further, it is argued that several methods may be needed to enable students with differing learning styles to grasp content. As a result a very large gap between educators and potential learners may develop. This gap may not begin with some of the problems mentioned already; it may in fact begin with the adult learner themselves, as proposed by Rice (2006). The general online learning readiness level of adults must be assessed if educators wish to successfully convey knowledge to their students. One such tool developed by McVay (2000) is a questionnaire designed to assist in this measure of online learning readiness.

This case study describes and documents prevailing attitudes, for an individual rural community in south central Kentucky conducted and completed in 2007, toward the use of the Internet as related to economic development, community enrichment, and personal growth. A series of interviews with public officials and questionnaires distributed to the general public were combined

and thematic patterns developed to document the behaviors, beliefs, opinions, and values of the community as they relate to Internet-based learning. The current coverage of broadband Internet in the community was also a consideration in this process. The service options considered included DSL, cable, and wireless connections but did not include cellular wireless or satellite. Cellular and satellite were excluded due the higher cost of unlimited service and startup equipment, respectively. Interview transcripts derived from the informal interviews, along with questionnaire results, were examined and analyzed revealing the seven themes.. The seven themes are 1) Importance of High-speed Internet Availability, 2) Attraction of Professionals to the Area, 3) The "Missing Generation," 4) Common Solutions & Working Together, 5) Lack of Vision for Online Learning, 6) Changing Cultures and Demographics, and 7) State and Local Government's Role and Regulatory Policy. These themes are discussed in relation to their interrelationships and guided by the research questions.

Methodology

Research Questions

1. How will Internet-based, online course delivery methods be received by adult learners in this rural setting? This question attempted to develop deeper insight into the types of learning that rural resident's value.

2. How does broadband Internet impact adult informal learning in rural areas?

3. What role do local government officials play, and what level of responsibility and liability should they accept as related to technology resources that impact the viability of community-based learning? This question seeks to discover exactly who has affordable broadband access in Butler County, what services are available and at what costs, who the main players in the broadband game are and what are some of the artificial barriers causing slower expansion of service.

Participants

Participants selected in this study were students in established Adult Education courses or selected for questionnaire distribution with the assistance of the Adult Community Education (ACE) Director, local churches, established rural development clubs, and several willing volunteers. The participants in the study included students who were currently enrolled in courses at this center, people who were not currently enrolled in an ACE course by distributed questionnaire, the County-Judge Executive, the Mayor of the county seat, the Superintendent of Schools (K-12) and finally the Director of ACE for the county. Enrolled students were used as a convenience sample since the courses were already in existence and consisted of approximately 125 adults, of which only 46 chose to participate. The participating learners already enrolled in adult education classes were asked to complete a questionnaire in class containing questions seeking to understand their motivations for enrollment, their general attitudes toward using technology to learn, whether they have ever enrolled in an adult education course or likely would be, and what types of course(s) they may be willing to take. An additional 750 questionnaires were distributed either through local civic, religious, and business organizations. The selection criteria attempted to include a cross-section of the county. This was done by using zip codes to ensure that the majority of the county's residents were included in the study, but the judgment of the ACE Director determined the exact sample based on her past experience dealing with student enrollments and knowledge of the group being sampled (Gay & Airasian, 2003).

The two governmental leaders selected, the mayor of the county seat and the County Judge-Executive of the county, were interviewed because as the chief elected officials of the community, they have the greatest potential impact on the improvement of required technological infrastructure, community support, and acceptance. The K-12 Superintendent and Director of Community Education were selected because of the potential influence on young adults as they transition from high school to adult life.

Data Collection and Procedures

This study employed a qualitative-quantitative methodology using a pragmatic approach which allows for the use of both deductive and inductive reasoning (Tashakkori & Teddlie, 1998). The specific approach used is described as a parallel mixed method design where the quantitative data (surveys) and the qualitative data (interviews) are collected simultaneously and then "analyzed in a complementary manner" (Tashakkori & Teddlie, 1998, p. 47).

A modified McVay questionnaire was used to address the participant's readiness for online learning experiences. There are 13 items on the instrument and participants record their responses on a 4-point Likert scale. This survey has been used in several studies (Smith, 2005; Smith, Murphy, & Mahoney, 2003) and its reliability and validity is established by a study performed specifically on the instrument (Smith, Murphy, & Mahoney, 2003). This study concluded that the McVay e-readiness survey is reliable with a Cronbach alpha of 0.83, although it did suggest work be performed on specific questions to "yield a better contribution to the reliability of the instrument" (Smith et al., 2003, p. 63). The Smith (2005) study resulted in a Cronbach alpha of 0.79 which again is sufficient to assume reliability, with the understanding that reliability coefficients are difficult to state appropriately because they are dependent upon the group being tested (Gay & Airasian, 2003). Additional questions were added to the original McVay instrument. The first new question will ensure that students already completing the instrument in a course setting do not repeat the questionnaire by mail. The second new item will ask the participant where they reside based on zip code.

Data Analysis

The major findings are seven themes; which is the importance of broadband Internet, attraction of professionals to the area, the missing generation, common solutions and working together, lack of vision for online learning, changing cultures and demographics, and state and local government's role and regulatory policy. One prominent theme, importance of broadband Internet, is discussed independently as well as woven into each of the other themes identified and emphasized by each respondent as a critical building block in order to achieve online learning adoption. This included social, economic, and educational goals as defined throughout the interview process.

There are two primary areas of data collection used to establish findings, questionnaires and interview transcripts, respectively. There were other sources used to assist in support of the two primary sources, like the broadband Internet coverage map for the county (ConnectKentucky, 2007) and information collected during informal visits to community clubs. This process consisted of two primary activities. First, interview responses were coded to help identify "meaningful patterns of response" (Hague, 1993, p.47). Coding is defined as "the process for categorizing qualitative data and describing the implications and details of these categories" (Trochim, 2001, p. 160). Open coding techniques were used initially to help establish the categories. Selective coding was used to place interview results into the appropriate categories. Constant comparative analysis is the scheme utilized as the coding process to "unitize" and to "categorize" (Tashakkori & Teddlie, 1998, p. 123) the narrative text collected from interviewees. Because of the types of data collection methods being utilized, interviews and questionnaires, and also due to the inclusion of some of the participants in the research process, data triangulation (Patton, 1987) was used as the primary preventative technique to ensure construct validity (Yin, 2003). A parallel mixed analysis (Tashakkori & Teddlie, 1998) of interview results and questionnaire statistics, as well as any inclusion of current trends and relevant literature, assisted in reducing researcher bias and increasing the truthfulness of the description of this specific phenomenon (Denzin, 1978).

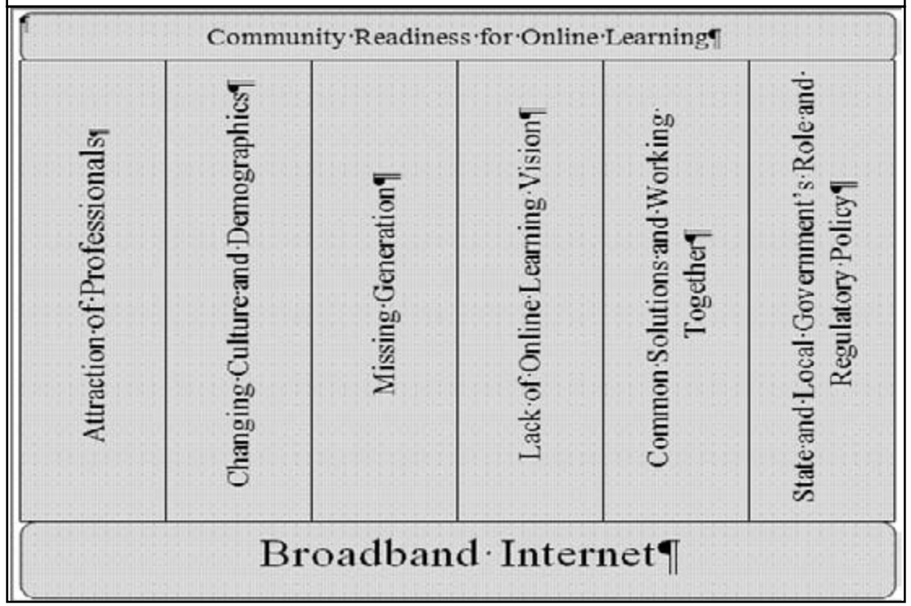
After transcribing the interviews, notes were placed in the margins of transcripts to identify thematic labels. Once all themes were identified and labeled, they were transferred to rows in a spreadsheet with each assigned a short description. Columns headers were assigned to the respondents and the process of noting which themes were in common began. Initially, 15

themes were identified, but that number was later reduced to seven. The themes that were eliminated were consolidated into the remaining themes during the initial analysis. This process consisted of numerous iterations of reviewing interviews notes and transcripts as relationships were identified between themes.

Findings

Analysis of collected materials indicates a clearly defined baby boomer grouping with a high level of resistance to accept technological change. The GenX'er grouping is comprised of both those that have adapted to computer technology but struggle with its usefulness post-high school and traditionalists who under great social pressure feel obliged to continue family traditions. The millennial learners are represented by 18- to 30-year-olds who completed questionnaires, but were also described during interviews as "those who have grown up with computers" and may have even acted as teachers and technical troubleshooters for parents and grandparents. The analysis of the interview transcripts revealed themes common to two or more respondents and additionally identified themes that seemed to indicate incongruent ideas among these leaders. The model proposed (Atkinson, 2008) that depicts broadband Internet as the foundational cornerstone for community readiness for online learning is depicted in Figure 1. The final layer to this model is community readiness for online learning. Each of the themes discovered during research must be addressed to foster positive attitudes and acceptance of learning via the Internet.

Figure 1
Seven Themes and Interrelationships that Support Online Readiness



Thematic Relationships

Broadband Internet will be discussed here only as the foundation necessary to address other issues identified by the six remaining themes. Each of the six remaining themes exhibit dependencies to each of the other five in addition to broadband Internet. Some cases are unique in that each theme depicts a perspective that requires different lenses to establish definition. This implies that as each theme's relationships are discussed, new associations may emerge not previously mentioned. Using only interview responses and the subsequent analysis of themes that emerged, an attempt was made to define all major associations.

Broadband Internet that is both accessible and affordable is a fundamental requirement supporting the attraction of both new working professionals and encouraging growth from within the community. As established in the findings, it is also needed to foster changing learning needs of the various learner types, as well as to help transition those that are a part of the missing generation and enable working relationships between young, middle-aged, and older adults. The lack of an online learning vision is not surprising considering the lack of broadband Internet in this community. Each of the interviewees expressed their desire for countywide broadband as well as their perception of the needs, but leaders, both educational and elected, must work to find common ground on the issues, better understand constituent's needs, and plan for solutions.

The attraction of professionals theme relates to five other themes directly, 1) changing culture and demographics, 2) the lack of an online learning vision, 3) state and local government's role and regulatory policy, 4) the missing generation, and 5) common solutions and working together. The attraction of professionals is related to the changing culture and demographics in that as younger people continue to receive exposure to broadband access throughout their K-12 education, first, more technology-ready, knowledge workers will be available locally to spur entrepreneurial economic expansion, and second, potential employers will consider the area for investment as millennial learners mature. Additionally, the views of working professionals will alter expectations by demanding increased usage of the Internet for private-sector and governmental services. This also indicates a direct linkage to the missing generation and state and local government's role in policy themes. Most GenX'er and millennial learners, along with those baby boomers who are motivated to adapt, will eventually reach heightened levels of economic, political, and social status. As this occurs, the transition in the area to a technology-centric society will slowly become a reality and considered a natural aspect of life. There is also a strong relationship with the lack of vision for online learning. Several interviewees commented on how new people to the area might have a cumulative effect enhancing attitudes regarding learning online; however, the realization that the chicken and the egg adage of which is first applies in this situation. The attraction of upwardly mobile professional types will almost certainly require a liberal approach to online learning prior to their recruitment to the area. This attribute might become one of the attractions for people accustomed to online banking, government e-services, and online college degree programs. Finally the relationship to common solutions and working together is evident when local leaders discuss a technology center built to lure employers to the area. This approach will almost certainly cause prospective industry to consider the community but it revolves around vocational training and primarily for high school graduates. The adult and community education staff expressed concerns related to the transition of K-12 graduates to adulthood and that adult learners often leave the community for adult education courses offered locally.

The missing generation theme relates to four other themes directly, 1) the lack of an online learning vision, 2) state and local government's role and regulatory policy, 3) changing culture and demographics, and 4) common solutions and working together. First, it was discovered that many people are unwilling to invest the time needed to learn new computer and Internet skills. Because of the differences in exposure, younger children are growing up accustomed to the technology available, which creates a divide between the younger learners and primarily baby boomers. The younger, more aggressive learners exert pressure on adult educators and at times community leaders. This divide has placed adult educators in positions that determine course topics and curriculum but having insufficient understanding of the technology being taught. It is posited that the lack of vision for online learning contributes to the perpetuation of the missing generation and that, conversely, the existence of an Internet culture gap (Hecht, 2001) continues to coerce resisters into technological hiding. This gap also relates to state and local leaders' general

lack of knowledge regarding regulatory policy at all levels. This deficit creates the perfect breeding ground for denial by claiming relative ignorance of policy related to technology because of a lack of understanding of technical subjects. The millennial learners and many of the GenXer's are valuable resources for leaders not adept at computing-related technology and should be utilized to achieve common solutions by working together. The presence of a generational gap as discussed by several respondents is indeed supported by literature that described three major groups; baby boomers, GenX'ers, and millennial learners (Aviles, Phillips, Rosenblatt, & Vargas, 2005; Lippincott, 2005; Oblinger, 2003).

Table 1 depicts the three basic groups, baby boomers, generation X'ers, and millennial learners, by offering brief demographical data and tendency statements coupled with excerpts of comments made during interviews or drawn from questionnaires. These small nuggets of information validate the presence of all three groups in this rural community their use in the formation of conclusions later in interpretations of findings.

The common solutions and working together theme relates to four other themes directly, 1) the lack of an online learning vision, 2) state and local government's role and regulatory policy, 3) changing culture and demographics, and 4) attraction of professionals. The leaders in this community clearly understand and accept that it is their accountability to establish a vision. This vision encompasses broadband availability throughout the community but also includes online learning, both formally and informally. Some educators believe that they have a clear vision, but government leaders are apparently struggling with their role and how to best provide assistance. Even education leaders admit that teachers may not understand or share the vision being espoused of laptop initiatives and broadband Internet for every student. Elected officials are perplexed in part because of their inability or unwillingness to invest time into understanding current policy at state and federal levels. These same officials see firsthand how children and young adults are surpassing those people in the current socioeconomic control structure in knowledge related to Internet usage and technology, but seem to be in a *wait and see* state. As GenXer and millennial learners continue to increase in number, they continue to grow impatient with traditional methods of learning and business. Many of these potential working professionals leave the community in favor of more progressive areas and potential transplants are reluctant to relocate to areas absent of expected services which now include broadband Internet. The issue here is not whether the stakeholders are willing to work together and arrive at common solutions, it may be that they lack the skill set necessary to achieve such lofty objectives.

The lack of an online learning vision theme relates to four other themes directly, 1) the missing generation, 2) common solutions and working together, 3) changing culture and demographics, and 4) attraction of professionals. The lack of specificity by elected officials was revealing, yet all those interviewed recognized the need for lifelong learning. One respondent even used the exact phrase *lifelong learning*, but the prevailing thought among all interviewees doubted whether older adults would be willing to invest the time needed to adopt online learning. Considerable time was spent discussing the generational gap that exists and its effect on people's perspectives on dealing with the differences in learners but with no clear direction. The story told of the farmer who after completing a course that included a new computer placing the unpackaged equipment in the bed of his truck during a rain storm is among the best describing not only the training needs but also the generation gap. An assumption was posited by some interviewees that by providing the facilities and other infrastructure, as in the form of a technology center, that this would cause the majority of people to arrive at common solutions by enrolling in course offerings suiting their needs. While one elected official felt that the area was "doing pretty good [sic]" in terms of training needs, others expressed considerable concern with local residents' utilization of facilities, as many choose to train outside the county. This tendency for flight outside of the area to often more costly courses is related to the changing culture in the county as younger learners display their disdain for the status quo (Oblinger, 2005). The attraction of professionals theme is related in that local adult educators real-

Table 1
Profiles of Baby Boomers, GenXer's and Millennial Learners

Learner Type	Demographic	Supporting Statements
Baby Boomers	▸ Age 50 years and older ▸ Average years online 5.5 ▸ Only online occasionally ▸ Technology not central role in their lives ▸ May be more comfortable using a library than Internet ▸ Often views Internet as obstacle ▸ Depending on age 7% to 31% hold college degree or beyond ▸ As high as 30% earn less than $30K and only 14% earn more than $75k	▸ "We call our granddaughter to help us fix problems on our computer, and I suspect there are many others in the same shape" ▸ "Most people just don't see the value of their time investment to learn how to use the Internet or even a computer" ▸ "There is definitely a generation gap because I used to believe that at my age I would never have to deal with the computer." ▸ "...We will get an older person who has really wanted a computer for a long time but has just come into a situation where they can afford to buy one" ▸ "Personally I don't use the Internet to that big of degree...I don't, what is it called, surf."
Generation X'ers	▸ Age usually 30 to 50 ▸ Average years online 8.75 ▸ Invested in technology but may still view it as intrusive ▸ Uses Internet frequently ▸ Often prefers Internet to libraries for research ▸ Depending on age 19% to 45% hold college degree or beyond ▸ Approximately 15% earn less than $30K and 32% earn over $75K	▸ "I see broadband Internet throughout the county as a big investment...but probably one worth making." ▸ "I think broadband county-wide would be great, but I don't think it should be an added tax burden to taxpayers." ▸ "If we had widespread broadband I would offer more classes in the specific programs to help further people's educations."
Millennials	▸ Age 30 and younger ▸ Average years online as high as 10 ▸ May have started using Internet as young as age 5 ▸ Prefer team working activities ▸ Exhibit high fascination with new technologies ▸ Tend to be ethnically and racially more diverse ▸ Views technology as natural part of life ▸ Strong preference to use Internet over libraries and other traditional resources ▸ As high as 40% earn bachelor degrees or beyond ▸ Only 11% or so earn less than $30K while as high as 41% earn over $75k	▸ "I don't remember anyone under 25 years old who has taken a computer class." ▸ "I think a trend had started here, people have begun to realize that if you are going to get a job you have to be trained, they realize that they have to have a college degree now." ▸ "Our students are actually ahead of our teachers with regard to classroom technology...the kids imbed in it into their lives, but the teachers don't see it as any more than fantasy." ▸ "Young people like my grandson, if it's not changing, going fast and enticing, interactive and virtual he is bored!"

Note: Adapted from "Boomers, Genxers, & Millennials: Understanding the New Students" by D. Oblinger, 2003, Educause, pps. 37-45, and "A Typology of Information and Communication Technology Users" by J. Horrigan, 2007, Pew Internet & American Life Project: http://www.pewinternet.org/pdfs/PIP_ICT_Typology.pdf.

ize the need for valued certification program offerings but can't justify their practicality or costs. Yet, local elected officials all defended the positive effects that online training experience would afford people as they pursued promotions or new positions or even as a major new industry enticement.

The changing culture and demographics theme relates to the five other themes directly, 1) the lack of an online learning vision, 2) state and local government's role and regulatory policy, 3) common solutions and working together, 4) the missing generation, and 5) attraction of professionals. A discussion regarding adults desire to pursue their G.E.D. and or to enhance literacy through the local adult and community center uncovered situations where these courses were utilizing online resources on the Internet. This seemed odd considering adult educators admitted they were hesitant to offer many online oriented courses in light of the relative absence of broadband countywide. The lack of an online vision for learning in the community, one that can be communicated to the vast majority of adults, is at play here. Adult educators expressed concern over a dysfunctional relationship between K-12 experience and young people's transition to college or professional life and cited numerous instances supporting their claims. In this community the adult and community education department reports to the school Superintendent, but yet it was not apparent that the various groups were working together to resolve anything. This isn't implying that these people aren't trying or that they don't have good intentions. But there is obvious disconnect between K-12 and adult education, with a Superintendent that has a vision he has not yet committed to those in his organization as of yet. When there is a lack of common goals within education, local elected officials are certainly not in a position to help shape visions, arrive at solutions, or even present a united front that might be attractive to potential professionals considering the area for residence. The millennial learners and, most likely, many GenXer's continue to show interest in newer innovative tools like smart phones, iPods and MP3 devices and feel that technology is underutilized for learning. They are finding the path to progressive change slowed by traditionalists bent on preserving community history. One of the most revealing discoveries was the complete lack of mention of minority groups by any leader. This attitude is most likely covert but is present. Considering one of the goals is the attraction of professionals to the area, it is very likely that the community will become increasingly diverse demanding even more communicating and collaboration.

The state and local government's role and regulatory policy theme relates to three other themes directly, 1) the lack of an online learning vision, 2) attraction of professionals, and 3) common solutions and working together. Perhaps the most revealing fact demonstrating a lack of online learning vision was the general belief that state and federal legislators are "duly aware of our needs" as related to broadband Internet deployment and coverage. Among the interviewees there was consensus that localities should depend on third-party providers for Internet and not compete in the municipal realm. There was one dissenting opinion who felt strongly that community governments should play an active role in providing service especially when private providers seemed unresponsive to needs. An active vision for online learning that is clearly defined and easily understood would at the very least expose this difference of opinion and would elicit debate and facilitate working together for a common solution. A key difference between elected officials and educators is how they view assessment of any broadband Internet deployment. Educators would, of course, prefer to measure based upon some criteria that depicts progress based on learning. Politicians will argue for economic development metrics claiming that what is good for the economy is equally good for the school system. In effect, both arguments may have valid contentions and need discussion to find common ground. Finally, local government officials have a responsibility to represent the community in a positive light. This includes educating themselves on current policy and legislation related to broadband Internet and how it may empower their community. Active participation might also include involvement in online courses at the adult and community education center, visiting other communities that implemented e-government services, and investigating options for funding broadband deployments.

Discussion of Findings

Formal Learning

This community, like most, is changing in terms of growth, norms, and attitudes. The rate of that change may be more or less rapid, but as older generations' age, others mature and espouse their own values and belief systems establishing their own blended culture. The generation gap that exists in this community without question affects decisions about computers, the Internet, and online learning. The influence of those who were raised without such innovations on those who view technology as a natural part of their lives (Oblinger, 2003) has limitations but is present. Even without the widespread deployment of broadband Internet within the county, children experience virtual-based learning activities in schools, people find that their work Internet connection enables them to traverse new territories, and certainly those young adults who attend college soon discover that high-speed Internet is as necessary to their success as their textbooks.

Access to high-speed Internet service is a determinant in adults' choosing online learning options in this community. To the extent that today's online learning tools are based on streaming, multimedia requiring considerable bandwidth, people simply will not consider learning online without broadband. On numerous occasions during interviews, this story was clear; dial-up Internet is too slow to consider doing anything beyond email and light surfing. Many questionnaire respondents indicated that they had participated in some form of online class but had to use a high-speed connection at work due to slow Internet access at home. This further reinforces the belief that no real consideration will be given to online learning until an improvement in Internet connection speeds is achieved. The richness of streaming video and audio and the learning facilitated is virtually impossible to receive without broadband access (Malecki, 2003). Grubesic (2003) and Hecht (2001) both recognized the need for broadband speeds as a way of providing access to health care, financial services, career opportunities, and education. This need that people have for access to these critical services highlights the importance of home broadband Internet connections.

Residents have successfully used their broadband connections to assist in buying and selling homes. Success tends to breed success, and as these and other stories circulate through the communication channels in the community, other people that are perhaps less trusting will decide to try the Internet for their own purposes. This community's average age is 37, not significantly different from the rest of the United States average age of 36. Business people in the community openly admitted that even though they were resistant to broadband initially, demands created by business software were significant enough to cause a change of heart. It may be concluded that the present lack of broadband presence is not attributable to an aging population or even a lack of motivation on the part of business development. It is surmised that this lack of broadband is due, at least in part, to lack of provider presence and adequate competition.

Further evidence of the need for broadband Internet is the construction of a technology center that is annexed to the adult and community education facility. Among the primary resources touted at this center is broadband Internet accessibility. This connectivity will assist in learning for those students who decide to remain in the community after high school and attend one of several program offerings but does little to aid in the countywide deployment of broadband Internet. The issue is whether broadband access needs to be deployed to the so-called last mile. The last mile refers to Internet connectivity to the individual housing unit (Grubesic, 2003). For online learning to occur, the needs of the consumer must be satisfied. Convenience, cost, and availability are critical factors to broadband adoption (Horrigan, 2007). The majority of adult learners are non-traditional students with different challenges from that of full-time, campus-based students. These learners are looking for methods of completing their degree aspirations and must face work and child-rearing related limitations to course schedules, course load and options available, and often even physical access to the campus libraries (Oblinger, 2005). Local elected officials all indicated that people had contacted

them with regard to bringing broadband Internet to the county and were clear that they wished to enroll in online college courses but felt unable to participate. Additionally, open responses on questionnaires indicated a need for work-oriented training courses online as well. One respondent expressed a desire to take a cosmetics company's online courses but indicated that the company specifically recommends high-speed access before attempting to access course content.

One key objective of local elected officials is to attract additional professional types to the community. The lack of Internet infrastructure plays a key role in several ways. First, the fact that those familiar with services in urban areas now inquire about not only housing, schools, water quality, as factors considered before relocation, but now have added broadband availability to this list. While there is little research to support this supposition directly, Eby and Allen (1998) found that among chief considerations by families prior to relocating was area cultural information, assistance in selling and purchasing a home, and education. Each of these determinants can now be directly accommodated using the Internet and there are some visionaries that are beginning to compare rural broadband Internet access to rural electrification from early in the 20th century (McChesney & Podesta, 2006). Secondly, the lack of Internet infrastructure plays a key role in that boomers are already less comfortable with new technology that their GenXer and millennial learner counterparts. Infrastructure typically implies monetary investment and the boomers often have a considerable stake in decision-making (Glaser, Aristigueta, & Miller, 2003). This may aggravate the situation in the community in terms of attracting professionals should these young people upon graduation become expatriates.

The option of growing professional types from within becomes apparently obvious for this small community; however, examining the educational aspects of the area, the outlook is not positive. The high school graduation rate for this county is lower than the national average, and nationally, those without a high school diploma adopt broadband at an abysmal rate of 21% (Horrigan, 2007). According to Pew Internet & American Life Research (2005) people that achieve a bachelor's degree or above adopt broadband Internet at home at a 70% rate. To attract working professionals to the area, local officials should consider addressing this current internal educational issue. The attraction of new business and industry is also a key to bringing outside, professionally-oriented talent as well. But this approach also has limitations and depends heavily on the types of businesses that decide to locate in the community. Small business creation and incubation is becoming increasing popular and has demonstrated some success in the United Kingdom and here in the United States (Atherton & Hannon, 2006). Small businesses represent over 99% of the total employers in the United States; they encourage local entrepreneurship and create social capital (Morrison, Breen, & Ali, 2003). There may be valid concerns surrounding the availability of entrepreneurial skills development, which according to Hannon (2005) is one of the five fundamental building blocks to establishing a "core management capability profile" (p. 67). Luke (1991) established the "bottom line for rural industrial and professional development as job creation and capital investment" (p. 16).

Cultural beliefs and values play an important role in this community as in most, but they are also a hindrance to progress. Convincing people of the value proposition (Glaser, Aristigueta, & Miller, 2003) is closely related to the cost of Internet access, according to Malecki (2003), and barriers even more difficult to overcome are not technical but have more to do with human nature (Turner, Thomas, & Reinsch, 2004). Perceptions by those in rural areas are often driven by traditions that are not entirely trusting of technological advances and fail to understand the potential of, in this instance, high-speed Internet (Obilade, 2001). Perhaps being perceived by their peers as a technical "geek" or as one who "thinks they are smarter than everyone else" is also an inhibitor (Ball, 2005). People often see these advances as necessary for the improvement of public education but do not have any notion of the potential beyond K-12. There may be some people who generally don't trust online education due to media reports regarding *diploma mills*, but most as described here simply do not understand how such learning can occur. The

significance of the absence of broadband Internet is once again highlighting people's inability to visualize such educational opportunities. The importance of broadband in rural areas will only be realized if sufficient training accompanies its deployment. Once the possibilities for learning are realized, formal online education can help empower the oppressed through educational opportunities and the "democratization of information" (Strover, 2003, p. 275); for the poor and illiterate, informal and incidental learning will likewise increase providing at a minimum a more level playing field (Gorski, 2003).

Informal Learning

Broadband offers those who utilize it more than just a faster way of checking their personal email or surfing the net. High-speed access enables adults who wish to start or expand a business the ability to reach potential consumers literally anywhere on the planet. The world of formal educational opportunities is expanded to almost unending heights due to the number of institutional offerings, evolving technological advances in content delivery, and the convenience of learning using on-demand pedagogies. The individual who may have never considered returning to college or engaging in other available forms of adult learning is afforded options once hindered by constraints of time and physical location. Older learners require more time to process new information than younger counterparts (Cross, 1981), which may offer one reason as to why older adults are more resistant to online learning technologies and methods.

Roberson and Merriam (2005) developed a model that depicted the process of self-directed learning especially among older, rural adults. Self-directed learning skills are critical for all learners to some extent, but especially to Internet-based learners. This model indicates that interest must be generated through either an internal or external incentive and that learners must be able to access resources to focus their attention and effect an adjustment in their learning that leads to some resolution. This community's ability to access resources has been artificially restricted due to the low availability of the catalyst, broadband Internet, which in itself should also be considered a primary resource. Informal learning may be more difficult to track, but the tendency of all interviewees and many questionnaire respondents to focus on vocational development activities may indicate that the more formal methods of learning are recognized while less formal events are not. According to Coombs, Prosser, and Ahmed (1973) adult education is categorized as formal, nonformal, and informal. Formal learning typically leads to a degree or credits and occurs in specific educational settings such as schools, universities, and training centers. Nonformal learning occurs to organized activities but those apart from educational institutions. Examples might be found in civic organizations or churches. Nonformal learning was discovered during the interview process as part of this research. One interviewee mentioned that his church is actively pursuing Internet technology as a learning strategy for both staff, members, and as part of their outreach ministries. Informal learning occurs every day to virtually all people because it is dependent upon life and how we deal with social relationships and experiences (Merriam & Caffarella, 1999). In every case those interviewed included business leaders yet only one person mentioned the inclusion of educational resources. Measurements usually cause one to think of financial constants and variables that are charted to indicate whether profitability is achieved or not. One of the primary reasons for the delay in broadband deployment into rural America is based upon this financial modeling (Malecki, 2003). While it is important to measure economic growth in communities, and perhaps even to understand the relationship between broadband Internet and fiscal growth, using this measure alone is as dangerous as attempting to quantify the value of particular disciplines like the arts, humanities, and social sciences (Ehrenberg & Epifantseva, 2001).

There are many people that are interested in tools that will aid them in personal hobbies like quilting and restoring old cars, or because they perceive that this desired knowledge will assist them at home. In rural life, skills not necessarily valued by others become almost required to survive. Examples include farmers who need to repair their machinery, to repair their own automobile, weld, pull electrical wire, or apply ba-

sic plumbing skills. The volume of information available on the Internet in the form of videos, graphic intensive tutorials, schematics, and pictures is enormous and can solve some informal educational needs, assuming of course one can access them. The availability of friends to assist in a learning activity is a key component of rural life (Roberson & Merriam, 2005) and the rural development clubs in this community are examples of a valuable support system (Wenger, 1998). There are tasks that transcend neighbors' capabilities, however, not to mention the importance of performing self-managed research on the Internet that further builds self-confidence in one's ability to learn independently.

Additional research is recommended in the areas of gender and learning venue differences. Differences in learning styles, in this case, between male and females may help to understand the way in which formal and informal courses can be structured. It is also prudent to believe that additional factors may be discovered when considering online vs. more traditional learning methods.

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The Application of International Service Learning Principles

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ABSTRACT

Hands-on and real-world experiences through international service learning are invaluable experiences for students in a pedagogy environment. Learning objectives of an international service program go beyond building knowledge and skills sets to transforming students by providing a diverse learning experience with a lasting impact. Students become part of the global community. The authors seek to incorporate and adapt current international service learning study abroad objectives to an applied example in healthcare. The applied example requires two semesters of classroom work culminating with graduate healthcare students traveling to Honduras to assist in providing for the health needs of vulnerable and marginalized communities. During the first semester, the students conduct a health assessment and a demographic profile of a Honduran village to determine health needs and then generate an outreach plan based upon the significant health needs of the village. In the second semester, the students travel to Honduras and collaborate with a local medical clinic to provide logistical and operational support to a chosen medical mission.

Introduction

Hands-on and real-world experiences are invaluable experiences for students in a pedagogy environment. Learning objectives for such experiences go beyond building on knowledge, skills and abilities. Experiential learning through service learning builds on personal growth and understanding.

The National Service-Learning Clearinghouse (2008) defines service learning as "a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities" (para. 1). With international service learning, the learning objectives expand to include "respect for other cultures, cultural and linguistic competency, and reciprocity between the server and the served" (Sternberger, 2005, p. 79). Furthermore, "students' world-views are challenged as they confront a number of different and often conflicting beliefs and behaviors in the settings that are typically outside of their range of experience" (Sternberger, 2005, p. 79).

When a service-learning project takes place internationally, students become a part of the global community. Students who participate in this type of experience gain a sense of civic duty that reaches beyond the benefit of the local community. Through multicultural exposure, real-world experience, and community work, students achieve a sense of global responsibility.

By bringing students outside of the classroom and into the community, educators are able to provide a diverse learning experience with a lasting impact. Allowing students to "give back" to a community outside of their local environment through an educational project deepens that experience. An international service learning experience combines cultural exposure with civic duty. The authors seek to incorporate and adapt current international service learning

study abroad objectives to an applied example in healthcare.

The Principles of International Service Learning

In its Declaration of Principles, the International Partnership for Service Learning and Leadership (IPSL, 2009) outlines seven reasons why service learning is valuable. The authors seek to explore and expand on several of these basic principles. The research recognizes that these principles function dependently upon one another. Additionally, the authors will apply a real-world international service-learning project. This organization notes that service learning (IPSL, 2009):

1. enriches students' learning of academic subjects
2. develops leadership skills
3. promotes intercultural and international understanding
4. fosters in students personal growth, maturity, the examination of values and beliefs, and civic responsibility
5. provides help to service agencies and to communities
6. sets academic institutions in a reciprocal relationship with the community
7. advances our understanding of societies, cultures, and world issues

Developing Leadership Skills

As previously mentioned, the IPSL (2009) states that service learning develops leadership skills in students. The authors would expand this principle to state that education through international service learning promotes global leadership. The learning experience enables students to enhance leadership skills through team building and exposure to the global community.

Providing a global perspective through a multicultural learning experience is invaluable. It is a global world, and thus, universities must educate individuals who are able to think and act on a global scale. International experiences establish responsible stewards of a global community who will become tomorrow's global leaders.

According to Victor Betancourt-Santiago, Director Center for Global Education, Marymount University, Arlington, VA., "It is our mission to educate global citizens" (V. Bentancourt-Santiage, personal communication, February 3, 2010). This type of program gives students the opportunity to become aware of issues, not only around the world, but also to see how these issues affect their own communities. This speaks of the interdependence of nations. In today's world, students will be at a disadvantage if they do not have a global service-learning component within their curriculum.

Advances Understanding of Societies, Cultures, and World Issues and Promotes International Understanding

The principles work in conjunction with one and another to provide a bridge between cultural knowledge and cultural sensitivity. As students are able to understand other cultures and issues facing those cultures, they are better able to understand world issues. Through the agenda of service learning, students engage in diverse cultures around the world. The aim is to integrate students into a global network. This endeavor is sometimes difficult due to the existence of economic and political climates around the world (Grushy, 2000). These fundamental constraints exist in most nations, especially in developing nations. Consequently, students perceive the constraints as barriers to the engagement and learning process. It is, therefore, essential for instructors to facilitate the learning process by refocusing students on the profound necessity for social change (Grushy, 2000).

Additional barriers exist in stereotyping. Students bring preconceived notions about the practices and customs of the specific international community. Furthermore, Grushy (2000) stated that the international community may also have

preconceived notions pertaining to the United States. Thus, students are faced with inherent barriers to their learning and service.

By gaining multicultural and international familiarity and knowledge, students become more culturally sensitive. Students begin to integrate and apply knowledge about different cultural groups, and therefore begin to operate more effectively within those groups. Eventually, students become culturally competent. This skill set ultimately improves professional outcomes.

Sets Academic Institutions in a Reciprocal Relationship with the Community

The authors would adapt the ISPL principle to refer to students rather than the academic institutions. Similar to the principles discussed previously, the international service-learning program places the students in a reciprocal relationship within the community (Kendall, 1990). Students may initially join a program with the notion of "helping others" who may be less fortunate (Grushy, 2000). However, once they have completed the program, students are transformed through their relationship with the international community. In turn, the community has helped that student grow, reflect, and transform.

When students begin to recognize and accept the need for change, they are then able to transform their own behavior and actions when they return to the States. Thus, the relationship between the community served and the students is twofold. Students are providing a service to a community in need. Conversely, those students will then recognize the need for social change in their own neighborhoods.

Through reflection and action, the process of providing service to others transforms students. Community service is a reciprocal action between the server and those whom are served. The optimal outcome of an international service learning experience is that American students learn to reflect from their service and adapt their behavior upon returning.

In a global environment, young people can no longer afford to be ethnocentric. Students have an ethical obligation to think beyond the walls of the U.S. and their local communities. By providing services to an international community and then bringing this attitude of service back to the U.S., students begin to transform themselves into global thinkers and citizens of the world.

Provides Help to Communities

It is essential to a successful international service-learning program, that the institution clearly identifies the community's needs prior to engaging in a service learning activity (V. Bentencourt-Santiago, personal communication on February 3, 2010). These needs should be targeted with the help and input of the community to be served. It is the responsibility of the institution to incorporate the needs of the community without projecting or anticipating those needs. This is a necessary step in fulfilling an effective role for the community and accomplishing project goals.

The IPSL (2009) states that service learning programs provide help to communities. This is accomplished through the empowerment of community members and the civic responsibility of students engaged in service-learning projects. The hope is that these factors are sustainable.

Fosters in Students' Personal Growth, Maturity, the Examination of Values and Beliefs, and Civic Responsibility

Previous research outlines two approaches to service learning; charity and social justice (Lewis, 2004). Service learning programs based on charity provide students with the opportunity to serve less privileged individuals (Lewis, 2004). Students then reflect on this experience via some type of coursework. The basis of social justice service learning is to engage students in academic experiences that make an effort to empower communities (Marulla and Edwards, 2000). In addition, as stated by the Association of International Educators, "Students who live and learn in countries and cultures other than their own gain important global competencies and cross-cultural sensitivities that enable them to acclimate in a global climate of constant change" (NAFSA, 2007, p. 1).

It is the obligation of the academic institution to instill moral and ethical responsibility in students. It is also the responsibility of the institution to facilitate the understanding and application of ethical and moral standards in a global environment. Through the educational process, students will gain a global and ethical appreciation. A service-learning program, specifically a global experience, is a perfect vehicle for accomplishing this objective.

Applied Example

Marymount University is using the previously described methodological framework to develop an international service learning course for graduate healthcare management students. The students will be traveling to Honduras to assist in providing for the health needs of vulnerable and marginalized communities. The project will be implemented in two courses over two semesters and will be in partnership with the Pan American Medial Society. This organization is a Virginia-based medical association that works to improve healthcare and medical conditions for disadvantaged individuals in Latin America and the Caribbean.

The courses for this project are Strategic Planning and Marketing in Healthcare, HCM 555 and Global Health, HCM 585. Each course will be three credit hours. The students in HCM 555 will target a local village in rural Honduras. Students will conduct a health assessment and demographic profile of the village to determine the significant health needs and demand. The students will then generate an outreach plan based upon the community's health needs. The plan will be supported by a medical clinic within a 60-mile radius of the main Honduran village population. The plan will combine community outreach with strategic medical planning.

Each plan will be presented to the instructors of the course, as well as the Director of the Pan American Medical Society. Plans will be graded on research and content, operational feasibility, realistic nature, and strategic initiative. At the semester's end of HCM 555, students and faculty will choose the best plan to put into operation in Honduras.

Approximately fifteen graduate students will participate in the HCM 585 course. Students enrolled in HCM 585 will meet once a week in 3-hour sessions for six weeks prior to travel departure. The sessions will consist of: 1.) group work, 2.) team building activities, 3.) cultural competency exercises, and 4.) medical logistics lectures and discussions.

Students will receive pre- and post-tests to assess their expansion of cultural sensitivity and knowledge. At the completion of the six-week in-class sessions, students will depart for Honduras. While in country, the students and volunteers from Pan American Medical Society will implement the outreach plan.

The students will stay in the country for ten days and will work with the Pan American Medical Society on the above-discussed medical mission. While in Honduras, the students will keep a personal reflective journal, which will be graded on content and completeness. Healthcare management students will provide logistical and operational support to the chosen medical mission. The intended purpose of this trip is to: 1.) provide health education, 2.) conduct minor surgical procedures, and 3.) disseminate medical equipment and supplies to those in need. In addition, the instructors will facilitate journal entries through daily discussion topics.

Upon returning to the U.S., students will meet one last time to reflect on their experience via classroom discussion. This final activity will conclude the coursework.

Final grades for the course will be based upon: 1.) the strategic plan, 2.) reflective journals, 3.) overall participation (classroom and on site), 4.) cultural knowledge and 5.) application of outreach.

In conclusion, by bringing students into the community, this program provides for the health needs of vulnerable and marginalized communities. It also provides a diverse experience with lasting reflective and transformational outcomes for each student.

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A Hybrid Approach to Teaching Ethics to Business School Undergraduates

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ABSTRACT

Business schools are increasingly charged with the ethical education of business students even though there is no universal agreement on the parameters of this mandate. The author's institution has chosen a hybrid approach to teaching business ethics, including a dedicated business ethics course taught by faculty trained in ethical reasoning, an integration of ethics across the business school curriculum, and a course with special emphasis on ethics – the business law course. This article explains how the special emphasis course, Business law and Ethics, fits within the hybrid scheme and assesses its success in helping students engage in ethical decision making.

Introduction

The recent report issued by the Ethics Education Task Force (Ethics Task Force) of AACSB International (AACSB), the accrediting body for business schools, admonishes that: "Business schools should help students to see the criticality of ethical leadership to effective and successful management" (AACSB, 2004, p. 11). However there is no consensus on how business ethics should be taught and who should teach it. There are those who assert that the AACSB's standard for ethics education is too tepid and ought to include a mandate for a dedicated ethics course in the business school curriculum taught by faculty trained in ethical reasoning (Swanson & Frederick, 2003). AACSB chose not to require a dedicated course instead leaving each school flexibility to create its own approach to teaching ethics in a way consistent with its institutional mission (AACSB, n.d.). An alternative to the dedicated course is an across-the-curriculum infusion of business ethics which requires faculty in the functional areas to integrate ethics into their respective discipline based courses. This approach often sounds better in theory than in practice. One survey, for example, cited a lack of ethics teaching materials and teaching notes as barriers to integration in the functional areas (Baetz & Sharp, 2004), while another survey of deans and curriculum coordinators from AACSB accredited schools showed a significant divergence between the level of ethics content that should be integrated and the level of ethics content actually integrated into the business curriculum (Nicholson & Michelle, 2009). These difficulties in curriculum integration often lead faculty to be reluctant to divert from their areas of disciplinary expertise to tackle the problem of improving ethical business behavior.

A Three Pronged Approach to Business Ethics Education

If business schools are to make a contribution to solving the problem of unethical business behavior, schools must adopt approaches that are focused and not merely ad hoc additions to disciplined based courses. The author's institution has chosen a hybrid of the above alternatives, a dedicated business ethics course coupled with integration of ethics issues across the business school curriculum, with special emphasis on ethics in the business law course. This approach allows students to be exposed to a variety of views of what it means to be ethical in business from a broad range of faculty. Because of the diversity of approaches, individual faculty can focus on those

aspects of business ethics about which they feel most comfortable and students will be exposed to a diversity of opinion and approaches to making ethical decisions.

The Dedicated Course

The first step is for all business majors to take a dedicated business ethics course taught by philosophy faculty. A dedicated course allows a sustained focus on ethics education grounded in moral theory, taught by faculty trained in ethical reasoning. It provides an historical and cultural context to ideas about ethics and morality and provides a common set of tools and vocabulary by which students with divergent personal views of morality can engage in a discussion of workplace and marketplace ethical issues. As a consequence students are exposed to ethics within the broad philosophical context of what it means to be an ethical person as well as the narrower context of what it means to be an ethical person in business. For example, the course includes study of both duty-based and outcome-based ethical theories espoused by Kant and Bentham. Although students may not always remember the particulars of Kantian theory or utilitarianism, they do remember the ethical guideline of evaluating actions in light of the consequences if everyone acted in the same way, or evaluating which actions create the greatest good for the greatest number of people affected by the action. Students can apply these guidelines to business decisions when choosing from alternative courses of action and use them as a basis on which to develop their own ethical decision making strategies.

Integrating across the Curriculum

The school's goals are to raise student awareness of ethical issues and of the ethical considerations in managerial decision making, goals consistent with those of other programs (Waples, Antes, Murphy, Connelly, & Mumford, 2009). Given the emphasis on ethical decision making, it is imperative to integrate ethics across the business curriculum by faculty teaching within the functional areas as students develop their disciplined based managerial skills. Realizing that such integration will vary from faculty member to faculty member and discipline to discipline, the school also decided that at least one course in the core business curriculum would have a special emphasis on ethics, the business law and ethics class. As a result, all business students are required to take two courses that specifically address ethics: the dedicated philosophy course and the business law and ethics course.

Special Emphasis Course: Business Law and Ethics

When combining ethics with a core business course, the ethics goals must integrate with the learning goals for the discipline related subject matter. The learning goals for the business law class include not only raising awareness of legal issues but also understanding the complexity of managerial decision making when there are multiple stakeholders and other parties impacted by the decision, and developing a strategy to address legal risks. Ethical decision making is similar in that it requires students to evaluate the circumstances giving rise to the ethical conflict, weigh the impact of the decision on the parties affected, balance conflicting interests of the parties, and make a decision taking ethical factors into account (Felton & Sims, 2005). This article will focus on evaluating student ethical decision making in the business law class and the effectiveness of the class as a component of the three pronged ethics education strategy.

Integrating Ethics and Business Law

Business students are constantly exposed to high profile stories of malfeasance through media coverage of such events. These stories, such as Enron or the Bernard Madoff Ponzi scheme, can discourage students and make them cynical, as found in one study where students in an organizational behavior course were shown the movie Enron, the Smartest Guys in the Room (Cox, Friedman, & Edwards, 2009). A meta-analysis of 25 studies on business ethics education concluded that a case-based approach combined with a cognitive approach that actively engaged students provided the most positive results (Waples et al., 2009). The Ethics Task Force noted that, ". . . a particularly useful exercise in helping students to heighten their moral reasoning abilities is to ask them to reflect on ethical decisions from their own experiences and to analyze them using multiple perspectives" (AACSB, 2004, p. 13). The pedagogical approach used in the business law and ethics course is to develop ethical awareness beginning with a discussion of personal values and progressing to managerial decision making scenarios. In the class analyzed in this article, students engaged in an exercise in which they compared U.S. law with the law of another country regulating the same business behavior but with different consequences. For example the privacy laws in the U.S. regarding collecting personal information online are dramatically different from those in the European Union (EU), with the EU having extensive regulations that protect and limit the use of personal information collected by electronic means (MacDonald & Ramaglia, 2005). The reasons for the differing regulatory schemes are grounded in the cultural, historical and social values of the countries, one approach (EU) being highly regulated and the other (U.S.) more content to rely on industry self regulation rather than government intervention (MacDonald & Ramaglia, 2005). Students grapple with the question: Does this difference make one set of laws ethical and the other not? After exploring how cultural, social and moral values become part of the fabric of laws regulating behavior, students reflect on how they acquired their own moral values that regulate their personal behavior. The challenge then is to move the ethics discussion from a purely subjective view of right and wrong to a strategy that helps assess business behavior in the marketplace.

The Control Analysis

Following the above discussions, the class read about a local controversy: a state university hired a new provost, only to remove him seven weeks later due to personality conflicts between the new provost and other officers. His employment contract provided that if he were removed as provost he would continue to hold a position as a tenured professor in the history department at approximately 80% of the provost salary, far surpassing the salary of any other history professor. A columnist for a local paper questioned the ethics of accepting such an outsized salary during a time of state financial crisis (Brodeur, 2009). For class purposes, the case was called The Problematic Provost.

Students completed a written assignment to discuss the ethical course of action for the provost. Although students were asked to consider only the ethical perspective, they generally crafted responses in legal terms, with 22 of the 32 students in the class finding a legally enforceable employment contract, case closed. Twenty-four of the 32 students indicated they relied on their personal feelings to determine the ethical thing to do. Creating a strategy to deal with the ethical complexities in managerial decision making is essential to achieving the goals of ethics education (Waples et al., 2009). The next task was to develop a simple framework that students could use to help organize their thinking and sort out the ethical complexities.

Developing a Strategy

Prior to devising an ethics strategy, students read the textbook chapter on ethics and decision making (Miller & Jentz, 2008). The chapter includes a section on ethical reasoning, with short summaries of duty-based ethics derived through religious teaching, Kantian ethics and the principle of rights, and outcome-based ethics derived from utilitarianism. It is intended to remind students of the material they learned in the dedicated business ethics course. The following exercise was intended to build awareness of ethics in everyday decision making.

Students were first quizzed on their perceptions of when it is acceptable to "slightly" break the law or be a little unethical. How many in the class have ever driven over the speed limit? Everyone. It is illegal but everyone knows that it is alright to speed a little. How many drive faster than 10 mph over the speed limit? Fewer hands are raised – that speed increases the likelihood of being caught. How many drive faster than 20 mph over the speed limit? Far fewer; not only do the odds of being caught increase, the amount of the fine increases as well. The next example used a New York Times article: "After Computer Glitch, Riders Ponder Ethics of Free Ticket" (Neuman, 2008). An error in the New York subway vending machines caused them to

dispense free tickets. How many students would make the effort to pay? None -- the amount is small, the impact is minimal and the personal inconvenience of tendering the payment overrides concern over the failure to pay. What if, instead of an impersonal subway system, a real person is involved? Students compared the ethics of a free subway ride to the ethics of keeping $5 too much in change from the grocery store checker. If they notice the error immediately, while still at the register, most students would return it. What if the error were discovered when away from the register but not yet out the door; or out the door but not yet in the car; or on the drive home; or after arriving at home? The farther the physical distance, the less likely the money would be returned. When asked to assess the impact of their actions on the store employee, there was little sympathy because the checker was the one who made the error.

Next students were quizzed about their reaction to a survey that found 64% of high school students admitted to cheating on a test (Crary, 2008). Students distinguished different types of cheating, with some cheating considered no more serious than driving slightly over the speed limit. Other cheating, such as on important exams, was unacceptable. Discussion moved from cheating on tests to cheating on resumes, as reported about certain corporate executives, directors and government officials (Winstein, 2008). Students again distinguished different levels of cheating. Fabricating credentials or degrees is unethical; omitting the job that ended badly, a strategic choice.

Finally the class focused on the 2009 recall of contaminated peanut products from the Peanut Corporation of America, which caused 8 people to die and over 600 hundred to be sick. Documents obtained by Congressional subpoena detailed email conversations between the company president and the factory manager concerning products that did not pass contamination tests. The manager was told to use a different testing lab which passed the product and the manager followed the president's direction to continue shipping it (Layton, 2009). If one test shows contamination and one does not, what is the ethical thing to do? What is the factory manager's obligation and to whom is it owed? To quote the Ethics Task Force report, "Ironically, a missing piece in most ethics education in the field of business is the development of 'moral courage,' which is particularly important in organizational contexts" (AACSB, 2004, p. 13). With each successive example, student discussion became more reflective about how failing to be ethical in seemingly inconsequential acts can desensitize a person to the ramifications such acts can have on other affected parties.

Creating a Decision Making Framework

The class researched several examples of corporate codes of ethics, and in small group discussions developed a series of questions to use to analyze ethics problems:

1. Does the action comply with the law?
2. Does the action comply with the company code of ethics?
3. Does the action involve any aspect of a professional code of ethics?
4. What other stakeholders are impacted by the action?
5. If the action requires favoring one group of stakeholders over another, which group should be protected?
6. To what extent do personal feelings influence the decision? Are personal feelings appropriate in this situation? Are they at odds with a legal or professional duty?
7. What are the consequences of the decision?

To give students opportunities to practice applying the framework, each of the exams for the remainder of the course included an ethics essay question. A post-test class discussion provided students the opportunity to evaluate how well they used the framework.

Assessing Student Learning: Ethical Decision Making

Student learning was evaluated based on how well students articulated their understanding of the ethical problem presented and how well they used the elements in the framework to reach a decision. None of the scenarios required reference to a professional code of ethics so that element of the framework was deleted. No student discussed the appropriateness of using their personal feelings to reach an ethical conclusion (although personal feelings played a part in determining ethical conduct), so that element was also deleted. The number of times a response included ethical or moral theory as part of the analysis was included to assess the effectiveness of the dedicated business ethics course. Responses were recorded each time a student used one of the elements in the framework; the number of responses for each element represents the number of students out of 32 total students who included that element in their response. Given the small sample size a qualitative narrative was used to evaluate results.

Table 1
Summary of the Problematic Provost

Element of Framework	#
Compliance with the law	9
Compliance with the company code of ethics	0
Stakeholders impacted by the action	0
Some stakeholders should have priority	0
Did personal feelings influence the decision	24
Are personal feelings at odds with professional duty	0
Consequences	5
Use of moral/ethical theory	0
N=32	

The Problematic Provost

Student responses to The Problematic Provost (PP) were charted according to the framework as a control against which to measure progress in the next three scenarios. The responses are summarized in Table 1 and show an overwhelming reliance on personal feelings to evaluate the conduct of the provost. In their narratives, students thought the provost's ethical response should be: renegotiate the contract and accept a lower salary (13), donate the excessive portion of salary back to the university (8), or do extra work to justify the salary (3). No students discussed other stakeholders to the transaction, such as the provost's family, and only five discussed the long term consequences of the provost's actions with respect to his future career in the university and elsewhere. Only after class discussion did students reflect on the conflicts faced by the provost in choosing between providing financially for his family and being sympathetic to the budgetary needs of the university.

The Overworked Techie

This scenario was based upon a court case filed against Microsoft Corporation by an employee who was working 60 to 80 hours a week as a systems engineer, routine hours for that job classification. The employee developed hepatitis C and his physician recommended cutting back his workweek to 40 hours to give more time to treating the disease. When the employee requested a 40 hour week, Microsoft gave him six weeks to find another job in the company where a 40 hour workweek would be acceptable. The employee failed to find another job so he was terminated. While a jury initially awarded him $2.3 million, the verdict was overturned when the appellate court found that the extended work week was common for all employees in that job category and that Microsoft's efforts to help him find another job were adequate to fulfill the company's legal obligations (Davis v. Microsoft Corp., 2002). Students discussed the question: Is it ethical for Microsoft to refuse the employee's request for reduced work hours?

When students responded to The Overworked Techie (OT) they had completed reading the textbook chapter on ethics and ethical reasoning, participated in the discussion of the various ethical situations presented in the lecture, and par-

ticipated in creating the decision making framework. Ten students used moral theory in their analysis of OT (see Table 2) an improvement over PP where no students referred to moral theory. Thirteen students relied on the law to determine if Microsoft's actions were ethically acceptable. Microsoft's value statement (Microsoft Corporation, 2009) was a part of the lecture class preceding this exam so students were sensitized to the existence of company codes of ethics and this was reflected with seven students referring to the stated values of the company. Students were more aware of the impact of corporate actions on stakeholders and consequences of the company's actions on its reputation, but only one student discussed the potential conflict between employee interests and shareholder interests. Post exam discussion reminded students of the employees who may be impacted by a colleague working fewer hours than required for the job and included an analysis of the conflicting interests of the stakeholders and whether or not those interests could be reconciled.

Table 2
Summary of the Overworked Techie

Element of Framework	#
Compliance with the law	13
Compliance with the company code of ethics	7
Stakeholders impacted by the action	6
Some stakeholders should have priority	1
Did personal feelings influence the decision	15
Are personal feelings at odds with professional duty	0
Consequences	9
Use of moral/ethical theory	10
N=32	

The Million Dollar Check

Prior to the exam date, students read a short article about "dead peasant" or "janitor's" insurance, a practice where companies purchased tax-sheltered life insurance policies on low-level employees and maintained the policies until the death of the insured when the company received the tax free death benefits. The policies were maintained even after employees were terminated. In 2006, Congress acted to limit such policies to highly paid employees, but policies on low-level employees already in existence were permitted to continue. Students were asked to evaluate whether or not janitor insurance was an ethical business practice prior to the change in law. The particular article used for The Million Dollar Check (MDC) scenario was purposefully chosen over other articles discussing the same insurance practice because it concerned a bank that had purchased a $1.6 million policy on an employee who was diagnosed with brain cancer and whose employment was shortly thereafter terminated (Schultz, 2009). After the employee's death, the bank collected $1.6 million on its policy but the family, a widow with two small children, had no insurance coverage because the family's policy terminated when employment terminated.

The fact that the company received a death benefit in excess of $1.6 million while the family received nothing elicited responses based on personal feelings from 27 of the 32 students (see Table 3). Even those who said the practice was acceptable because it was legal at the time expressed personal distaste for it. Others cited the subsequent legislative action as evidence that the practice itself was unethical. Only two students acknowledged the conflict between the way they personally felt about the practice and the obligations that a company owes to its shareholders to engage in profitable legal activities. The personal and in some cases emotional responses of the students seemed to distract them from using the framework to think through the ethical implications. Only three students considered other stakeholders and only three applied moral/ethical theory to the analysis.

Post-test discussion focused on whether the circumstances of the family should influence the way a business practice is evaluated when the practice is legal and economically benefits company shareholders. The increase in the number of students who relied on personal feelings in their decision making was troubling, not because personal feelings have no place but because they derailed the students' use of the other considerations in the framework. Table 5 summarizes all of the scenarios and shows that the role of personal feelings in the MDC scenario exceeded that of any other.

Table 3
Summary Million Dollar Check

Element of Framework	#
Compliance with the law	13
Compliance with the company code of ethics	1
Stakeholders impacted by the action	3
Some stakeholders should have priority	1
Did personal feelings influence the decision	27
Are personal feelings at odds with professional duty	2
Consequences	6
Use of moral/ethical theory	3
N=32	

FedEx vs. UPS

Students read a few of the many articles in the press concerning the efforts of FedEx to defeat a proposal in Congress to remove certain FedEx employees from the jurisdiction of the Railway Labor Act of 1926 (RLA) (the law which regulates labor activities for airlines), and place them under the jurisdiction of the National Labor Relations Board (NLRB) (Roth, 2009). Because of differing regulations, unions are perceived to have greater advantage in organizing a labor force under the NLRA rather than the RLA. UPS, FedEx's competitor, was lobbying for the regulatory change since its labor force is highly unionized and FedEx's is not. At the same time FedEx entered into an option/purchase contract for 30 airplanes with the Boeing Company. The contract included the right for FedEx to cancel the purchase if the labor legislation passed Congress. The implication in the article was that Boeing would have a vested interest in lobbying against passage of the labor legislation. Students were asked to evaluate FedEx's use of the Boeing contract as a way to influence Congress. Students once again relied more on their personal feelings to support their decision (24) than on ethical theory (2) (see Table 4). Given that both parties in the FedEx scenario were corporations, 17 students did discuss the impact on shareholders, particularly Boeing's shareholders. In the post-test discussion many students raised ethical questions about lobbying Congress in this way. The article referred to FedEx's actions as "blackmail" by a corporation to influence the vote of Congress about a public law and that editorial tone contributed to student's using personal feelings rather than the framework in reaching their decision.

Table 4
Summary FedEx v. UPS

Element of Framework	#
Compliance with the law	3
Compliance with the company code of ethics	1
Stakeholders impacted by the action	17
Some stakeholders should have priority	0
Did personal feelings influence the decision	24
Are personal feelings at odds with professional duty	0
Consequences	7
Use of moral/ethical theory	2
N=32	

Conclusion

Table 5 compares progress, or lack of progress, in the way students utilized the framework for each successive scenario over the course of the semester. It shows a clear trend for students to use personal feelings in their analyses but not to evaluate the appropriateness of their feelings in the context of their professional obligations. Although the company code of ethics became a factor when analyzing the case immediately following the class session on codes of ethics, students quickly forgot about them in subsequent scenarios, even though the companies involved were likely to have adopted such codes. The same observation can be made with respect to

the application of moral or ethical theory. Analyzes of the scenario immediately following the class where moral theory and reasoning were discussed show the greatest use of such theory to help in decision making. This awareness was significantly reduced for subsequent scenarios. Although each of the scenarios involved at least one institution, corporations in three scenarios and a public university in the other, only in the FedEx case did a significant number of students address stakeholder concerns.

Table 5
Comparing Scenarios

Element of Framework	PP	OT	MDC	FedEx
Compliance with the law	9	13	13	3
Compliance with the company code of ethics	0	7	1	1
Stakeholders impacted by the action	0	6	3	17
Some stakeholders should have priority	0	1	1	0
Decision influenced by personal feelings	24	15	27	24
Analyzed personal feelings in context of professional duty	0	0	2	0
Consequences of decision	5	9	6	7
Applied moral/ ethical theory	0	10	3	2
N=32				

Table 6 tallies the responses for the total number of instances where students applied the elements of the decision making framework across the four scenarios, comparing the number of times students used each of the elements of the framework. In general students felt more comfortable in applying legal theories than in applying ethical theories in their analyses, with 38 total instances of applying legal principles, 15 applying moral theory. This observation highlights one of the problems with the integrative approach – students may perceive greater value in the discipline content rather than the ethics content, that is there is greater "grade value" allocated in the mind of the student to the subject discipline than to the ethics component. Future assignments in business law will have an explicit ethics grade component to remove any doubt of the value of mastering the ethics content. The lack of application of moral theory also raised the concern for more collaboration between philosophy faculty teaching the dedicated course and business faculty to assure a balance between moral theory and the application of that theory to contemporary managerial problems. Additionally, it is difficult to control at what point in the curriculum students take the dedicated course. It is designed to be a sophomore level course so that students can complete it either before they start the business curriculum or concurrent with the early core courses. Difficulties in scheduling have resulted in students taking it as early as the first semester sophomore year and as late as the last semester of senior year. Only 12 of the 32 students in the class already had the dedicated business ethics course or were taking it concurrently with the business law class. This flaw becomes apparent in the assessment which shows few students relying on moral theory to ground their ethical decision making.

Personal feelings influenced decisions in 90 instances. It is not clear whether students simply relied on an emotional response to make the decision or whether they were unwilling or unable to articulate the value system upon which they based the decision that they made. What is clear is that students failed to reflect on the appropriateness of using personal feelings as a basis for their business ethics decisions.

The implementation and integration of ethical decision making into the business law course is part of a hybrid strategy to expose students to ethics education through a dedicated philosophy course in business ethics coupled with integration of ethics across the business curriculum with

Table 6
Instances of Applying Decision Making Framework Elements

Element of Framework	Total Instances
Compliance with the law	38
Compliance with the company code of ethics	9
Stakeholders impacted by the action	26
Some stakeholders should have priority	2
Decision influenced by personal feelings	90
Analyzed personal feelings in context of professional duty	2
Consequences of decision	27
Applied moral/ethical theory	15
N=128 (32 students x 4 scenarios)	

particular emphasis in the required core class, business law and ethics. Ethics education can be effectively integrated into a business law class because ethical and legal materials are naturally complementary and the learning goals are similar in nature and utilize many of the same elements. The challenge for the instructor is to articulate the distinction between ethical analysis and legal analysis and to draw students into using their skills in ethical reasoning as developed in the dedicated class and other classes across the curriculum. The use of a decision making strategy and scenarios in which to apply that strategy as presented in this article was an attempt to assess the effectiveness of such integration. Students made the best use of the framework in the exam that immediately followed the classes devoted to ethics discussions and the creation of the framework. It is clear that strategies and the elements of the framework needed to be re-emphasized before each test for students to be mindful of using them when answering the ethics question. If greater reinforcement is needed for students to be cognizant of decision making strategies within the academic context then it would be fair to say that business must continue that reinforcement once the students become managers.

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Improving Financial Information Literacy in Introduction to Financial Accounting

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ABSTRACT

The motivation for this study came from a desire to improve teaching of the use of accounting information for decision making. The information literacy standards and related performance indicators guided the development of a semester-long case study by accounting faculty and academic business librarians. Their collaboration yielded a series of instruction modules and related student exercises leading up to a group activity involving the evaluation of a company as a potential investment for retirement savings. Students enrolled in two sections of an introductory accounting course volunteered to participate in this study. They provided information about their knowledge before and after all of the activities using a repeated measures research design involving pre-test and post-test questionnaires. The results of the study suggest significant improvements in financial information literacy upon completion of the case study.

Introduction

The American Institute of Certified Public Accountants (AICPA) has been a leader in efforts by the private sector to develop programs aimed at achieving financial literacy. Initiatives such as "360 Degrees of Financial Literacy" and "Feed the Pig" are designed to encourage the American public to effectively manage their personal finances (AICPA, 2007). The success of these programs remains in question as the number of individual bankruptcies soars (Cory and Pickard, 2008). At the same time, the United States (U.S.) Government Accountability Office (GAO) emphasized the growing importance of financial literacy in their report on the progress of the Financial Literacy and Education Commission (Commission). One reason is that "workers today are increasingly responsible for managing their own retirement savings" (GAO, 2007, p. 1).

Therefore, an even greater crisis may be looming in the future as the burden of providing sufficient income during their retirement years falls on individual citizens.

Throughout this decade, information literacy has been a priority of the American Library Association (ALA). In 2000, the board of directors of the Association of College and Research Libraries (ACRL), a division of the ALA, approved the information literacy competency standards. The standards provide "a framework for assessing the information literate individual" and address five levels of proficiency (ACRL, 2000, p. 3). Specifically, the standards for information literacy encompass the capacity to recognize the need for information, the ability to retrieve relevant information, the competency to evaluate the quality of the information, the skill to use the information effectively, and the understanding of the ethical implications of information retrieval and application.

This paper discusses a pedagogical research project designed to measure the effects of a collaboration between accounting faculty and academic business librarians to improve financial information literacy of students. The information literacy standards and related performance indicators provided the framework necessary to craft an interrelated sequence of instruction activities and associated exercises where introductory accounting students applied the knowledge they acquired during the instruction. Questionnaires, using a repeated measures design, solicited information about students' knowledge of accounting concepts and library resources useful in evaluating a potential investment in a company. The objective of this empirical study is to assess whether financial information literacy improved from the beginning to the end of the course in connection with the case study.

Background

Financial Literacy

As part of the Fair and Accurate Credit Transactions Act of 2003, the Financial Literacy and Education Improvement Act (Financial Literacy Act) established the Commission under Title V (U.S. Department of Treasury, 2009). The purpose of the Financial Literacy Act is "to improve financial literacy and education of persons in the United States" to ensure that people are able to manage their own money wisely including their retirement savings (U.S. Department of Treasury, 2009). An important aspect of this management is the ability to effectively invest these funds in various financial instruments including those offered by business enterprises.

The responsibility of individuals to provide for their own retirement has become increasingly important over the past twenty-five years. With Social Security on the road to insolvency (Farnam, May 13, 2009), the steady and dramatic decline of single-employer defined benefit pension plans necessitates an effective retirement investment strategy by each individual. (Pension Benefit Guaranty Corporation, 2009). In defined benefit pension plans, employers promise to pay specific monthly benefits to participants during retirement so the burden of accumulating sufficient funds to satisfy the projected retirement benefit obligations falls to the employer. Many defined benefit plans have been replaced with defined contribution plans where employers contribute specific amounts to pension plans with no guarantee of benefits to be received by participants during retirement. In many defined contribution plans, employees make investment decisions for their retirement account funds that were historically left to plan sponsors in defined benefit plans.

Research aimed at measuring and assessing the benefits of financial literacy programs has been plagued by the "primary challenge [of] defining and quantifying 'success'" (Braunstein and Welch, 2002, p. 449). The authors go on to suggest that the best measures of effective programs are when the program results can be compared with specific outcome measures based on an established goal. The information literacy standards and their related performance indicator outcomes formed the basis for the development of the instruction and various exercises for this project, designed to enhance financial information literacy.

A study on computer usage in the finance curriculum suggests that various databases can be included in classroom student exercises. Clinebell & Clinebell (1995) surveyed finance departments of U.S. colleges and universities and found that fifteen percent of respondents included database usage in their introductory finance courses (p. 135). Information literacy questions in this study addressed the use of databases for company and industry analysis.

Information Literacy

The development of the information literacy (IL) competency standards for higher education followed the efforts by the American Association of School Librarians Task Force on Information Literacy Standards to improve information literacy at the elementary and secondary education levels. The end result was the development of "a continuum of expectations... for students at all levels" (ACRL, 2000, p. 3). In addition, the ACRL detailed multiple performance indicators for each of the standards. In this way, the outcomes of learning activities, designed to measure the achievement of a specific standard, can be assessed. The ACRL believes that "both 'higher order' and 'lower order' thinking skills, based on Bloom's Taxonomy of Educational Objectives, are evident throughout the outcomes... [and they emphasize] that assessment methods appropriate to the thinking skills associated with each outcome be identified as an integral part of the institution's implementation plan" (ACRL, 2000, p. 3). Table 1 lists ACRL's five information literacy competency standards and the related performance indicators.

Several studies have recommended a separate university course to introduce students to available library resources (Sharkey, 2006; Goebel and Neff, 2007; Simon, 2009, referring to Bruner and Lee, 1970). Other researchers have recommended the integration of library resource instruction in "a single (or series of) lecture(s) into the existing curriculum." (Simon, 2009, p. 252 referring to a study by Culley et al., 1977; Alfino, Pajer, Pierce, and Jenks, 2008; Sult and Mills, 2006). Academic librarians have also emphasized the importance of a "course-specific collaborative approach to incorporating IL/BIL (Information Literacy/Business Information Literacy) into individual classroom settings" (Simon, p. 252). In summary, the review of the literature suggests no clear consensus for information literacy instruction. Faculty and academic librarians have struggled to find the correct balance of lecture, course-integrated, and credit-bearing information literacy instruction to meet the needs of faculty and students. The structure of information literacy instruction for this research project is consistent with Zabel (2004) where "it must be integrated, relevant, ongoing, collaborative, and applied" to be successful (p. 20).

Information Literacy in Business and Accounting

The ability to ethically use business information is absolutely essential in the current business environment where it is imperative to quickly find and evaluate new information that becomes available. Hawes (1994) concludes that the inclusion of information literacy education should help students become "competent entry-level knowledge workers in the information society" (p. 60), even though the interaction between librarians and faculty may be informal. "When workers lack information literacy skills there are tangible costs to the business that can result in both operational inefficiency and loss of business opportunities." (Cooney, 2005, p. 4 referring to a study by Cheuk, 2002). Jackson and Durkee (2008, p. 88) also indicate that "(c)ourse-integrated IL instruction sessions are an extremely effective method of introducing students to print and electronic resources in accounting as well as introducing and/or reinforcing information literacy concepts."

Accounting is greatly impacted by technology advancements and changes in global markets. As such, Gabbin (2002) asserts that accounting education must be improved so that graduates enter the workplace with the skills they need in the modern business world. Furthermore, accounting educators reason that the nature of accounting work demands ethical treatment of information and they call for research on how to effectively teach the related skills (St. Pierre, Wilson, Ravenscroft, and Rebele, 2009).

Table 1

Information Literacy Standard	Performance Indicators for Standard
One The information literate student determines the nature and extent of the information needed.	1. Students define and articulate the need for information. 2. Students identify a variety of types and formats of potential sources for information. 3. Students consider the costs and benefits of acquiring the needed information. 4. Students reevaluate the nature and extent of the information needed.
Two The information literate student accesses needed information effectively and efficiently.	1. Students select the most appropriate investigative methods or information retrieval systems for accessing the needed information. 2. Students construct and implement effectively-designed search strategies. 3. Students retrieve information online or in person using a variety of methods. 4. Students refine the search strategy if necessary. 5. Students extract, record, and manage the information and its sources.
Three The information literate student evaluates information and its success critically and incorporates selected information into his or her knowledge base.	1. Students summarize the main ideas to be extracted from the information gathered. 2. Students articulate and apply initial criteria for evaluating both the information and its sources. 3. Students synthesize main ideas to construct new concepts. 4. Students compare new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information. 5. Students determine whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences. 6. Students validate understanding and interpretation of the information through discourse with other individual, subject-area experts, and/or practitioners.
Four The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.	1. Students apply new and prior knowledge to the planning and creation of a particular product or performance. 2. Students revise the development process for the product or performance. 3. Students communicate the product or performance effectively to others.
Five The information literate student understands many of the economic, legal and social issues surrounding the use of information and accesses and uses information ethically and legally.	1. Students understand many of the ethical, legal and socio-economic issues surrounding information and information technology. 2. Students follow laws, regulations, institutional policies, and etiquette related to access and use of information resources. 3. Students acknowledge the use of information sources communicating the product or performance.

Association of College and Research Libraries (2000). Information literacy competency standards for higher education. Retrieved July 31, 2009 from http://www.ala.org/ala/ mgrps/divs/acrl/ standards/informationliteracycompetency.cfm#stan.

In the context of this introduction to accounting course, three overarching objectives of the class are articulated in the course syllabus. Students should be able to:

- Analyze and interpret the accounting information of business enterprises for making decisions about the three primary activities: 1) operating, 2) investing, and 3) financing.
- Describe the components of the four required financial statements and their interrelationships in the annual report of an enterprise. The four statements are the: 1) Income Statement, 2) Balance Sheet, 3) Statement of Retained Earnings, and 3) Statement of Cash Flows.
- Analyze the annual report of business enterprises in order to assess their performance for decision-making and to identify their major strengths and weaknesses.

Accounting education must be proactive in adopting methods to improve decision-making capability. Having the proper information as well as interpreting that information correctly is essential to accomplishing this purpose. One cannot form appropriate conclusions about business activities and effectively communicate these conclusions to others unless one possesses the information literacy skill set to acquire high quality and relevant information. Therefore, the "call for changes in accounting education to better teach these [critical thinking and continuous learning] skills is congruent with goals of business librarians to teach information literacy skills in disciplines such as accounting" (Cunningham and Anderson, 2005, p. 4).

Past studies have also shown the effectiveness of collaborative teaching efforts for information literacy training. Murphy & Hoeppner (2002) found that the combined efforts of an accounting educator and librarian helped with student preparation for class projects in an intermediate financial accounting course. Jackson & Durkee (2008) also utilized a collaborative approach that had a positive impact on information literacy skills of students in an international accounting course. Still, collaboration between accounting educators and librarians could be further explored. Cooney (2005), in a survey on business information literacy instruction, found that most efforts were directed to graduate students or upper-level undergraduates. Cooney concluded that "(p)erhaps the greatest challenges to collaboration are engaging the interest of faculty who have not collaborated in the past, and enlarging upon the collaborative efforts already in place," (p. 18).

Methods

In order to determine whether there were improvements in students' financial information literacy, a repeated measures research design was used involving a pre-test and a post-test. The primary interest is whether there was a significant shift to greater knowledge as demonstrated by the selection of the correct response after all instruction and related classroom/homework activities were completed. The nonparametric sign test was used to test the significance of the post-pre differences (Siegel and Castellan, 1988). The exact upper-tail p-values were computed using a binomial distribution calculation.

Participants

Sixty-two students enrolled in two sections of an introduction to financial accounting course in a Midwestern University volunteered to participate in this study. The participants were varied in their chosen majors including liberal arts, education, pharmacy, fine arts, and business even though the majority indicated that they were sophomores in business. Both sections were taught by the same professor and a script was used for instruction to eliminate differences associated with section. The responses from fifty-four of the participants were used to analyze the data; the difference between the number of volunteers and usable responses is attributable to two factors, withdrawals from the course (four students) and failure to take the post-test (four students).

Instruction and Student Activities

Two categories of instruction were provided to students over the course of the semester in between the completion of the pre-test and post-test questionnaires. The first category involved the classroom discussions of financial accounting at the introductory level including financial statements and their analysis. The second category of instruction emphasized the effective use of library resources and the ethical use of information. This latter training was divided into three modules. After each training session, students were assigned classroom or homework assignments in order to immediately reinforce the knowledge conveyed in the instruction and ultimately to permit an evaluation of a company as a potential investment (Bloom, 1956). The critical point to note here is that the information gathered on the questionnaires was taught in an applied setting where students actually used the information to evaluate a potential investment in a real company rather than simply parroting the information they were told in accounting lecture or in the library instruction. Refer to Appendix A for an outline of the sequence of instruction and student activities. The training and student exercises were developed to address a specific information literacy standard and performance indicators. Therefore, they are shown in the outline associated with specific student activities.

The first module included instruction on using the library resources including several databases (i.e. Mergent Online, Key Business Ratios, EDGAR, Business Source Complete, and others). Second, hands-on training was provided in which the instructor and librarians guided students through the search process of a publicly-traded company and its industry. Students were encouraged to ask questions along the way and each student completed a search log to document their investigation activities. The last module involved a brief training session on proper citing.

Pre-Test and Post-Test Questionnaires

Two questionnaires were drafted. The twenty-five-question pre-test questionnaire (Pre-Test) captured students' knowledge about using accounting information and library resources to facilitate financial evaluation of a company and its industry. For this section, students were instructed to select the correct response to each question but they were also given the opportunity to choose the response, "I don't know." In addition, this questionnaire collected various types of demographic information about the participants including education and experience. Specifically, the questions consisted of five major types: (1) new accounting concept or library resource; (2) accounting concept or library resource directly covered in an earlier business course; (3) library resource indirectly taught in a previous business course; (4) forms of plagiarism directly covered in an earlier business course; and (5) demographic data. The pre-test questionnaire was not discussed at all during the semester.

The post-test questionnaire (Post-Test) consisted of twenty questions where the first fifteen were identical to the non-demographic questions on the Pre-Test. The remaining five questions in the Post-Test gathered information about students' perceptions of the benefits of library instruction embedded in a course involving collaborations between business faculty and librarians.

The analysis and discussion in this paper is limited to the first category where the instruction of new concepts was relevant to all subjects in this study. Plans for additional analysis are discussed in the Future Research section towards the end of this paper.

Analysis and Expectations

Histograms of frequency of responses to each question on the Pre-Test and Post-Test were examined. For the questions addressing new concepts, it was expected that the most frequent response would be "I don't know" on the Pre-Test. In addition, it was anticipated that the participants would provide the correct response on the Post-Test if the instruction and educational activities were effective.

In order to use the sign test, participant responses were coded according to the correctness of their answers for each question on the Pre-Test and the Post-Test where correct and incorrect responses were scored as 1 and Ø, respectively. The Post-Pre difference was calculated for each item. A difference of 1 indicated a correct response on the Post-Test and an incorrect response on the Pre-Test; a difference of -1 indicated the answer was correct on the Pre-Test but wrong on the Post-Test; and a value of Ø indicated no change. In essence, each subject functioned as his/her own control. A p-value of less than .Ø5 implies that financial information literacy of the students significantly improved with the instruction and student exercises of the case study.

Results and Discussion

There were five questions on both the Pre-Test and the Post-Test that addressed new financial information literacy concepts. Table 2 presents a summary of the findings where significance was found for each question and for all five questions overall.

The first question asked about a potential investor's comparisons of a company's current financial condition to its industry and/or its own financial history in evaluating a potential investment in a company. On the Pre-Test, a sole participant indicated "I don't know," and a surprisingly high percentage of students (79.63%) indicated correctly that both industry and the company's own past financial performance would be relevant to this decision. Students were required to provide at least three years of historical company financial ratios as well as industry ratios in connection with the group project activity of the case study. Almost all students selected the correct response on the Post-Test; the frequency of respondents choosing the correct response on the Post-Test was 96.3%. The sign test showed significance (p<.ØØ2Ø) suggesting a significant improvement in students' knowledge of information useful in evaluating a potential investment in a company.

The second question addressed specific knowledge of common-size financial statements. The researchers' expectations were realized by the Pre-Test results. The results showed that the majority of students (53.7%) responded "I don't know" and that only two participants (3.7%) selected the correct response on the Pre-Test. Therefore, the majority of participants admitted that they did not have knowledge of common-size financial statements at the beginning of the course. Excel-based common-size income statements and balance sheets were generated and submitted by each group as part of the group project portion of the case study. There was no requirement, however, that each student prepare his/her own set of common-size financial statements. On the Post-Test, the correct answer was associated with the highest frequency of responses (61.11%) and the sign test was also significant (p<.ØØØ1). These results suggest a significant improvement in knowledge of common-size financial statements at the end of the course. They also encourage accounting faculty to require all students to apply their knowledge of common-size financial statements through individual student preparation in order to enhance learning effectiveness.

The third question asked about the U.S. Securities and Exchange Commission database which is available to the public without an access charge. In the Pre-Test, 7.41% of the subjects selected the correct response and 55.56% indicated "I don't know" the name of the EDGAR database. The first library instruction module discussed this database and students should have included this database in their search log in connection with the second library instruction session. In addition, students used EDGAR for their group projects to access financial information in the company's Form 1Ø-K for their evaluation of the potential investment. The histogram for the Post-Test results showed the selection of the correct response with a frequency of 85.19%. The sign test showed significance (p<.ØØØ1) consistent with this evidence.

Similar results were found in the data on the fourth question inquiring about the database which allows a user to search for information using a company's ticker symbol. The correct responses accounted for 25.93% of the total and 57.41% of respondents indicated "I don't know" on the Pre-Test. The ticker symbol was introduced in the first library training module. Students were likely to use a company's ticker symbol in their search log even though a student could perform some of their search activities using the company's name or other identifiers. They may have also used the company's ticker symbol in their investigation activities for the group proj-

Table 2
Frequencies and Significance Findings

	Pre-Test		Post-Test	
	n	%	n	%
In evaluating an investment in a company, a potential investor should make comparisons of the company's current financial condition to				
A. its industry.	8	14.81	1	1.85
B. its own financial history.	2	3.70	1	1.85
C. Both A and B are true.	43	79.63	52	96.30
D. None of the above.				
E. I don't know.	1	1.85		
Significance: p<.0020	54	100	54	100
Common-size financial statements involve				
A. Investigating financial statements of companies with similar total asset size.	13	24.07	8	14.81
B. Converting financial statement dollar values into percentages.	2	3.70	33	61.11
C. Evaluating finanacial statements of companies all in the same industry.	9	16.67	9	16.67
D. None of the above.	1	1.85	4	7.41
E. I don't know.	29	53.70		
Significance: p<.0001	54	100	54	100
The U.S. Securities & Exchange Commission provides free access to a database of company filings with this agency. What is the name of this database?				
A. SECFORMS	7	12.96	4	7.41
B. GOVDOCS	2	3.70	1	1.85
C. GASB	11	20.37	1	1.85
D. EDGAR	4	7.41	46	85.19
E. I don't know.	30	55.56	2	3.70
Significance: p<.0001	54	100	54	100
Which database allows you to search for information using a company's ticker symbol?				
A. Market Insight	5	9.26	4	7.41
B. Mergent Online	2	3.70	8	14.81
C. Business & Company Resource Center	2	3.70	2	3.70
D. All of the above.	14	25.93	36	66.67
E. I don't know.	31	57.41	4	7.41
Significance: p<.0001	54	100	54	100
Under which company website heading are you most likely to find a company's financial statements?				
A. Products	1	1.85		
B. Suppliers				
C. Investors	48	88.89	54	100
D. Contact Us	2	3.70		
E. I don't know.	3	5.56		
Significance: p<.0156	54	100	54	100
Note: The correct responses are in bold print.				

ect. Over sixty-six percent of participants subsequently chose the correct response on the Post-Test. Again, the sign test indicated significance (p<.0001).

The findings for the fifth and final question did not conform to expectations. This question addressed the use of company websites to find financial information about a company. Students were asked to select the appropriate link to use on a company's website to find financial statement information. Only 5.56% of subjects chose "I don't know" and 88.89% selected the correct response of Investors on the Pre-Test. A possible explanation for the Pre-Test results could be that millennial young adults are quite internet-savvy (Oblinger and Oblinger, 2005) with online shopping at various publicly-traded companies. It is possible that at least some of them may have browsed company websites in the past and discovered a company's financial statements on their own through the Investors' link. This link was discussed in the first library instruction session and students used this link for their search log. There was complete consensus on this question in the Post-Test where 100% of respondents chose the correct response. The sign test for this question was significant (p<.0156).

The sign test for the combination of all five questions on financial information literacy was also significant (p<.0001). This finding suggests a significant positive effect on financial information literacy for new concepts taught in connection with a case study in an introductory accounting course.

Future Research

Several avenues are anticipated for future research. Data has been collected and has yet to be analyzed regarding differences in financial information literacy related to the demographic characteristics of the participants. Chen & Volpe's (1998) research findings suggest significant differences may exist based on gender and major. Their study found evidence that female subjects tended to be less knowledgeable than their male counterparts about financial matters including investments and that business majors were more knowledgeable about personal finance than non-business students.

In addition, some questions on the pre-test and post-test questionnaires that have not been discussed in this paper, address specific concepts and resources that were taught to some of the business students in an earlier course. The investigation of significant differences on these questions between the trained and untrained participants is important from a pedagogical perspective to see if information literacy skills can be learned and utilized in subsequent coursework. Furthermore, an analysis of students' perceptions of the helpfulness and desirability of instruction and collaborations between accounting faculty and academic business librarians could be performed. Such evidence may lead to increased use of these interactions in the future.

It would be interesting to research potential differences in student learning by comparing classes with an embedded librarian similar to this study with classes where a librarian visits the classes for the standard "one-shot" instruction session. In this way, research into learning effectiveness of a particular instruction methodology could be assessed. Finally, it is important to study the impact of collaborative teaching efforts between faculty and librarians on students' financial information literacy in other course settings and with other subjects.

Summary and Conclusions

This study investigated whether collaborative efforts between accounting faculty and academic business librarians could have significant positive effects on financial information literacy of students in an introduction to accounting course. The information literacy standards and related performance indicators guided the development of a semester-long case study entailing a progression of instruction and student activities integrated into the course design. The results of this study provide some evidence that significant improvements in financial information literacy can be achieved, thereby encouraging faculty and librarians to develop opportunities to pool their collective talents and expertise for the benefit of students.

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Appendix A
Outline of the Sequence of Instruction and Student Activities

Scenario One (applicable to Activities One through Four done on an individual basis):

Last year, you established a retirement savings account and this year, you are interested in selecting several public companies in which to invest. A good friend of yours has suggested that a great potential investment is ***(Public Company's Name)***. Therefore, you want to thoroughly investigate ***(Public Company's Name)*** before you invest any of your money in this company.

I. Information Literacy Standard One: The information literate student determines the nature and extent of the information needed.

A. Performance Indicators for Standard One Relevant to Activity One:

1. Students define and articulate the need for information.
2. Students identify a variety of types and formats of potential sources for information.

B. Activity One:

Exercise 1: Determine the nature and extent of information needed.

Homework Questions – Prepare a word-processed response to each of the following questions. Bring two copies of this homework to class and one copy will be turned in before the beginning of class.

1. Do you need information to accomplish this task? (Yes or No)
   If so, what specific information do you need? If not, why not?
   If so, what types and formats of potential sources of information do you need?

C. Classroom Discussion of Activity One (Led by Accounting Instructor)

Instruction Module One: Library Training on Available Library and Online Resources – Students are instructed about resources available online and through the University's library including databases and print materials. Laptops are made available to students so that they can peruse these resources while the instruction is ongoing.

II. Information Literacy Standard One: The information literate student determines the nature and extent of the information needed.

A. Performance Indicators for Standard One Relevant to Activity Two:

3. Students consider the costs and benefits of acquiring the needed information.
4. Students reevaluate the nature and extent of the information needed.

B. Activity Two:

Exercise 2: You received library training on the resources available through the University's library and online in order to assist you in investigating ***(Public Company's Name)***.

Homework Assignment – Prepare a word-processed response for each of the following requirements.

1. In Exercise 1, students specified the types of information necessary to make good investment decisions about ***(Public Company's Name)*** which included the following:

   a. financial history
   b. ratio analysis
   c. stock price history and dividend trends
   d. future plans
   e. global market considerations
   f. economic and political environment
   g. comparisons with competitors and industry performance
   h. others

Briefly discuss the costs and benefits of acquiring each type of information.

2. In a separate paragraph, describe how you might want to change the types and formats of potential sources of information from your original thoughts based on the library training you received for the project.

C. Classroom Discussion of Activity Two (Led by Accounting Instructor)

III. Information Literacy Standard Two: The information literate student accesses needed information effectively and efficiently.

A. Performance Indicators for Standard Two Relevant to Activity Three:

1. Students select the most appropriate investigative methods or information retrieval systems for accessing the needed information.

2. Students construct and implement effectively-designed search strategies.

3. Students retrieve information online or in person using a variety of methods.

4. Students refine the search strategy if necessary.

5. Students extract, record, and manage the information and its sources.

Instruction Module Two: Library Training on Conducting a Company and Industry Search Including the Preparation of a Search Log – Students receive a search log template at the start of this instruction session. Laptops are provided to students so that they can begin performing their search of a specified company and its industry. They document their search activities through the search log while the course instructor and librarians are available for questions during the hands-on exercise.

B. Activity Three:

Exercise 3: Access the information you need in order to make this investigation. Download information on ***(Public Company's Name)*** and the beverage bottling industry in order to: (1) gain an understanding of the past, present, and future; (2) perform detailed financial analysis of ***(Public Company's Name)***; and (3) assess the current state of the beverage industry in relation to ***(Public Company's Name)***.

Homework (bring two copies – one to be turned in at the beginning of class): Prepare a search log to document the sources you used to research the ***(Public Company's Name)*** and its industry.

IV. Information Literacy Standard Three: The information literate student evaluates information and its success critically and incorporates selected information into his or her knowledge base.

A. Performance Indicators for Standard Three Relevant to Activity Four:

1. Students summarize the main ideas to be extracted from the information gathered.

2. Students articulate and apply initial criteria for evaluating both the information and its sources.

3. Students synthesize main ideas to construct new concepts.

4. Students compare new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.

5. Students determine whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences.

6. Students validate understanding and interpretation of the information through discourse with other individual, subject-area experts, and/or practitioners.

B. Activity Four:

Exercise 4: Now that you have been able to access information on ***(Public Company's Name)*** and its industry, you should be able to evaluate information and its source critically. Conduct a search on Google using the keywords "soft drink industry" or "beverage industry." From your search output, select one link to evaluate using the criteria listed in the "Evaluating Sources" handout.

Homework Assignment – Prepare a word-processed or an Excel-based response for each of the following requirements.

Requirement 1: Using the "Evaluating Sources" handout as your guide, answer the three questions for each of the criteria (Source, Currency, Scope, Content).

Requirement 2: Based on your evaluation, decide whether or not you believe the source is credible. Explain why or why not.

Instruction Module Three: Library Training on Proper Citations and Plagiarism – A PowerPoint Presentation is prepared and used in the third library training session. Students are also provided information for the group activity including background information, assignment instructions along with the minimum ratio analysis required for satisfactory completion of the project, and the method of evaluation. Several library guides are made available to students through the library website including a Library Tip Sheet specifically designed for this group project as well as citation guides.

Scenario Two (applicable to Activities Five through Seven done in groups of 3-4 students):

Last year, you established a retirement savings account and this year, you are interested in selecting several public companies in which to invest. You have investigated information about ***(Public Company's Name)***. Now, you are going to use this experience to investigate another company as a potential investment.

V. Information Literacy Standard Four: The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.

A. Performance Indicators for Standard Four Relevant to Activity Five:

1. Students apply new and prior knowledge to the planning and creation of a particular product or performance.

2. Students revise the development process for the product or performance.

3. Students communicate the product or performance effectively to others.

B. Activity Five:

Exercise 5: Download information on your company and industry in order to: (1) gain an understanding of the past, present, and future; (2) perform detailed financial analysis of the company on Excel that must include a common-size balance sheet and income statement and ratio analysis for the most recent three years; and (3) assess the current state of the industry in relation to the company including industry ratio data on Excel for the most recent year.

Deliverable: Generate Excel worksheets to be turned in the day of your group presentation.

VI. Information Literacy Standard Five: The information literate student understands many of the economic, legal and social issues surrounding the use of information and accesses and uses information ethically and legally.

A. Performance Indicators for Standard Five Relevant to Activity Six:

1. Students understand many of the ethical, legal and socioeconomic issues surrounding information and information technology.

2. Students follow laws, regulations, institutional policies, and etiquette related to access and use of information resources.

3. Students acknowledge the use of information sources communicating the product or performance.

B. Activity Six:

Exercise 6: Prepare a PowerPoint Presentation with your group discussing the desirability of investing in this company, short- and/or long-term. In this context, assess the financial health of your company and your company's industry.

Deliverable: Create a PowerPoint Presentation with appropriate citations to share your findings with the rest of the class.

C. Activity Seven: Complete a group member evaluation and evaluate the group project as a learning experience.

The Role of Pre-Competition Assessment, Group Size and Group Average GPA on Web-Based Simulation Team Success

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ABSTRACT

An exploratory study will examine the effect of three variables on student group position rank in an online computer simulation: (1) performance change across a two-phase pre-test, (2) group size, and (3) group average GPA. Data collected across two semesters provides a sample size of 17 student groups ranging in 4-6 members (n=82). Additionally, intercorrelations among each of the 3 variables, as well as a regression analysis of each of the 3 independent variables on the group position rank are provided.

Web-Based Computer Simulations

Online computer simulations are internet-based games which introduce a more realistic learning experience than pure theory or even case studies (DiMeglio, 2008). The use of computer simulations as learning tools has been mainstream since the mid-late 1970's (Sprouls, 1962; Trieschmann, 1976) due to the ability of students to learn through practice as opposed to the traditional hands-off approach. Umble, Umble & Artz (2008) describe the benefits of team-based competitions as learning tools and their positive effects on student learning process, student motivation to learn, greater retention of knowledge, a more comprehensive and integrative understanding of course material, among other benefits. Computer simulations have been used in various business disciplines: marketing, accounting (Polimeni, Burke and Benyaminy, 2009), organizational science (Hill, Bartol, Tesluk and Langa, 2009), political science and international relations (Meleshevich & Tamashiro, 2008).

In an effort to enrich the classroom experience for students in higher education, competitions, namely computer simulations, have been used heavily (Cantor, 1995). Positive outcomes from competition include learning reinforcement (Dweck, 1986), exposure to real-world decision-making scenarios, increased decision-making speed as well as longer information retention times (Bolt, 1993). Academic research has also recognized the ability for students to evaluate information, weigh alternatives and to make decisions in a virtual environment (Di Meglio, 2008). Di Meglio (2008) notes the helpful nature of the technological medium of computer simulations in the ability of the professor to watch student decision-making in real-time as well as their ability to provide timely feedback to students.

This study examines the effect of three variables on student group position rank in an online computer simulation: (1) performance change across a two-phase pre-test, (2) group size, and (3) group average GPA. Data collected across two semesters provides a sample size of 17 student groups ranging in 4-6 members (n=82). Additionally, intercorrelations among each of the 3 variables, as well as a regression analysis of each of the 3 independent variables on the group position rank will be provided.

CAPSIM©

The computer simulation used in this study will be CAPSIM©. CAPSIM© is a cross-functional team-based competitive computer simulation wherein students are tasked with managing a $100 million company over a simulated time period of up to 8 years (Saulnier, 2009). Over 500 business colleges and universities across the globe utilize the CAPSIM© Capstone Business Simulation (Saulnier, 2009). Within their simulated company, student groups are responsible for decision making in 4 interrelated functional areas: research and development, marketing, production and finance. The design of the simulation prohibits the use of outcome variables (e.g., profitability, ROI, ROA, etc.) as a unit of analysis for comparison between industries due to the uniqueness of each industry.

Group Simulation Assessment

The first variable is a two-phase pen-and-paper pre-simulation assessment which tests group knowledge of simulation parameters. The goal of the assessment is to promote learning of the simulation prior to competition. Pre-testing covers the student groups' knowledge of the simulation such as the functional decision making areas of the program as well as the decision making parameters such as how to calculate stock/bond issuance, marketing budgets, production costs, production forecasting formulas, growth percentages, etc. Here, we wanted to investigate the effectiveness of the group assessment: (1) Is it helpful to the students to take the group quizzes? and (2) Does the change in simulation-related knowledge increase over time? If so, is it a large enough effect to produce significant change in a group's overall simulation performance?

H1a: Quiz 1 and Quiz 2 scores are a significant predictor of simulation position rank.

Each student group is assessed using a 50-70 question quiz at two points in time prior to beginning competition. Quiz 2 is administered approximately 1-2 weeks after Quiz 1. Groups were allowed to pool their knowledge and complete the quizzes as a team. The goal for introducing quizzing was to encourage students to learn the program before engaging in competition: in short, to force them to pay attention early in the life of the game. Students also approach professor with better/higher quality questions and fewer technical/program application questions as a result of the quizzing. Finally, the quizzes also work to create an awareness of group deficiencies in knowledge of the simulation parameters.

H1b: The change in score from Quiz 1 to Quiz 2 is a significant predictor of simulation position rank.

Group Size

Much of the time group performance is better than the average group member (Rue and Byars, 2007). Using a group to make decisions has several advantages and disadvantages. Two of the

advantages are: greater pool of knowledge and different perspectives. For these advantages to be effective, there must be diversity in the group. Disadvantages include domination by one or more persons in the group and groupthink (Maier, 1967). In a study by Laughlin, Hatch, Silver, and Boh (2006), it was found that groups of three to five people perform better than individuals when attempting to solve complex problems.

To allow for diversity in this study, the groups were selected by placing different majors within each group. These majors included accounting, marketing, management, economics, and management information systems. Also, gender and race were assigned at random to the groups to allow for additional diversity. All teams were assigned with four, five, or six members. Statistical differences in simulation position rank and group size was examined.

H2: Larger groups have a lower position rank than smaller groups.

Group Average GPA

Finally, this study examines whether groups whose average GPA would be more likely to outperform those groups with lower GPA's. Past research has examined overall academic standing (i.e., GPA) and found evidence both supporting its impact on class performance (Bryan, Campbell & Kerr, 2003), while others have not supported the link (Jones, Moeeni & Ruby, 2005). Despite diverse findings, Lam (2009) finds high GPA's are positively associated with web-based course performance. Further, GPA was found to be a significant predictor of performance in the Major Field Achievement Test in Business administered by ETS (Bycio & Allen, 2007). Here, we examine whether groups with a higher average GPA are at an automatic advantage.

H3: Group average GPA is a significant positive predictor of group simulation performance.

Research Method

Data Collection

Data was collected across three college semesters over years 2008-2009 from graduating College of Business seniors. Group size and group average GPA was denoted by the professor. Each group was given two pre-tests before beginning simulation competition. These pre-tests were comprised of multiple-choice questions covering knowledge of the simulation itself (e.g., procedures for making decisions, decision parameter identification, location of information within the simulation, etc.). Each group worked together to complete a quiz.

Finally, simulation position is a rank-order provided by the computer simulation, which considers the financial performance of each group with multiple dimensions of business decision-making: R & D, Marketing, Production, HR and Finance, relative to their competitors (CAPSIM, 2010). The CAPSIM© simulation can be run across either 9 or 14 weeks during the semester. The data used for this study included a 9-week simulation competition. Based on the group performance across this time period, groups are ranked at the completion of the simulation within each class to arrive at the Simulation Position Rank variable.

Results

Data was analyzed using SPSS Statistics 17.0. Hypotheses were assessed using Linear Regression analysis. The data fails to support H1a (sig.=.28 Quiz 1 and .25 Quiz 2), indicating that the simple presence of quizzing has no significant impact on actual group performance in the simulation.

Further, the data fails to support H1b (sig.=.17) at an acceptable level of significance suggesting that any change in quiz score from Quiz 1 to Quiz 2 has no impact on the groups' overall performance. Interestingly, approximately one-half of the groups improved their Quiz 2 score over their Quiz 1 score, while the other half kept their score the same or exhibited a decrease in their

score. Post hoc analysis examined the significance of those groups who improved verses those whose scores worsened. Groups whose Quiz 2 score was below their Quiz 1 score showed a non-significant relationship to overall simulation rank (sig. =.48, Correlation=.238) while improving teams showed a slightly significant relationship to overall simulation rank (sig.=.12, Correlation=.59). This would indicate that those groups who improved their Quiz 2 score could perhaps have a greater advantage in simulation performance than those groups who worsen their scores.

H2 suggests a significant, negative relationship between the size of the work group and group simulation rank. The data fails to support H2 (sig.=.41) indicating that the size of the group has no impact on that group's performance.

Group average GPA shows no significant relationship with simulation performance rank (sig.=.79) thus showing no support for H3. Post hoc analysis examined the potential impact of group GPA on the group's ability to improve their quiz scores from Quiz 1 to Quiz 2 and found significance between the two variables (sig.=.05).

Discussion and Pedagogical Implications

Positive outcomes from competition include learning reinforcement (Dweck, 1986), exposure to real-world decision-making scenarios, increased decision-making speed, as well as longer information retention times (Bolt, 1993). Further, Di Meglio (2008) notes the helpful nature of the technological medium of computer simulations in the ability of the professor to watch student decision-making in real-time as well as their ability to provide timely feedback to students.

Umble, Umble & Artz (2008) describe the benefits of team-based competitions as learning tools and their positive effects on student learning process, student motivation to learn, greater retention of knowledge, a more comprehensive and integrative understanding of course material, among other benefits. Although this study utilized CAPSIM© computer simulation in analysis, other simulations could be utilized in the future in an attempt to generalize the findings in the future.

Results from this study suggest that the impact of quizzing student groups over their knowledge of the web-based simulation does not significantly influence the group's performance in the simulation. Post-hoc analysis reveals, however, that those groups who improved their score over time were slightly more likely to perform better. With this initial finding, it might be helpful for instructors to encourage the groups to study simulation material and to focus on quiz score improvement across time. Alternatively, if all groups were to increase their score on Quiz 2, thus eliminating groups who worsened their scores, the effect on overall simulation performance may decrease due to the fact that simulation performance is a competitive measure. Overall, however, student involvement in studying simulation rules and procedures would most likely benefit their performance.

Group size has well-documented impacts on performance (Moorehead & Griffin, 2001). Sizes of groups differ on their impact on effectiveness depending on the group's purpose (Shaw, 1981). Shaw (1981) finds that groups whose purpose is to generate ideas are optimized with a large number of members, perhaps up to 15 members. Further, groups with a large number of independent tasks will benefit from many members. As groups grow in size, so does the level of formality of communication, the complexity of task completion and the incidence of loafing among members (Shaw, 1981). The nature of the CAPSIM simulation implies that group members work together to make cross-functional business decisions although individuals have formalized organizational roles (e.g., VP of Finance, VP of Production, etc.). The impact of size of group on simulation performance rank showed no significance in this study. It should be noted, however, that sample used in this study included groups sized 4-6 members. Therefore, the groups in this study fell within the recommended size for functional groups. Future research could include group sizes outside the suggested optimal group size. Perhaps studying pair performance as well as larger group performance would be helpful in

examining group size as a determinant of computer-based simulation performance.

The overall intelligence of groups may impact their ability to perform relative to competitors. In this study, individuals GPA's were averaged to arrive at a group average GPA. Group GPAs in this study ranged from 2.7 to 3.3. Group average GPA shows no significant relationship with simulation performance rank. Therefore, there was no indication in this study that groups with higher average GPA's performed better in the simulation.

In order to further investigate the nature of academic performance on a group's simulation performance, post hoc analysis was performed. The potential impact of group GPA on the group's ability to improve their quiz scores from Quiz 1 to Quiz 2 was found to be significant. As a result, it seems that there might be a linkage between group overall academic performance and their ability to improve their performance. Therefore, future research might further examine the roles of each group member such as identifying any leaders/decision makers within each group as well as their GPA. It would certainly be conceivable that 1-2 persons in a group could utilize their group role as leader to improve performance.

In summary, this study found no significant linkage between group online computer simulation performance and (1) performance change across a two-phase pre-test, (2) group size, and (3) group average GPA. However, future research has an opportunity to further examine group performance as group roles are further identified. In addition, future research could utilize other simulations in order to generalize the findings found herein.

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Pedagogical Strategies for Teaching Moral Minimalism

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ABSTRACT

In 1986, Stephen Satris's article, "Student Relativism," meant to "offer analysis of, and suggest some methods for dealing with, a quite particular and peculiar problem in teaching philosophy...I speak of the problem of student relativism." (Satris, 1986, p. 193) The problem has not gone away.

However, psychological research suggests that the problem of relativism, a problem especially critical for teaching business ethics (or any other class in applied philosophy) is not insolvable. This paper, extending earlier work by R. McGowan, provides a brief account of research by Lawrence Kohlberg and William Perry on the structure of thought exhibited by students, gives evidence of that structure, and offers pedagogical strategies for overcoming that structure and attaining moral minimalism in the classroom.

Introduction

When he-who-shall-not-be-named told Harry Potter, "There is no good or evil, there is only power," J.K. Rowling identified a central problem for our time, namely, ethical relativism.

If Voldemort is correct, no standards exist for judging right and wrong; the exercise of power is the default mechanism for resolving dispute. Rowling could have had Stephen Satris's 1986 article in mind. Satris's "Student Relativism" meant to "offer analysis of, and suggest some methods for dealing with, a quite particular and peculiar problem in teaching philosophy...I speak of the problem of student relativism." (Satris, 1986, p. 193) The problem has not gone away.

However, psychological research suggests that the problem of relativism, a problem especially critical for teaching ethics (or any other class in applied philosophy) is not insolvable. This paper presents a brief account of research by Lawrence Kohlberg and William Perry on the structure of thought exhibited by students, provides evidence of that structure, and offers practical suggestion for attaining moral minimalism in the classroom.

The Structure of Student Thought

When Satris wrote, the research by Lawrence Kohlberg and by William Perry et al was not as widely known as it is now. Today, most professors understand that people, including students, develop in orderly, predictable though not invariable ways, and that people, including students, do not necessarily develop skill at moral reasoning over the course of a lifetime let alone one semester. In short, research has shown what professors have observed: people stop developing, willfully or otherwise. When confronted with a moral or intellectual challenge, especially to their world view, i.e., their sense of self and their place in the world, people often disengage from the hard work of thinking. That is, people often resist the cognitive conflict, as Kohlberg calls such challenges, or cognitive dissonance, as Perry refers to the challenges. In the classroom, a student may resist learning and avoid the necessity of adjusting his or her orientation to the world and altering his or her identity. Such a person demonstrates "the wish to retain earlier satisfactions or securities... the reluctance to admit one has been in error... and most importantly, the wish to maintain a self one has felt oneself to be." (Perry et al, 1968, p. 52)

Perry observed common patterns that would avoid the difficulties of accommodating challenge, including retreat (182), i.e., when a person drops to a lower level of skill and solves the problem without developing new skill. Perry notes that retreat often involves anger directed especially to people who represent or manifest the challenge. Needless to say, professors are frequently the target of students who have difficulty getting out of their 'comfort zone.' Haan (1963) offered similar observations, citing isolation, rationalization, indecision, and denial as examples of immature defense mechanisms. Further, Hart and Chmiel (1992) found that the use of these mechanisms inhibits moral growth.

However, some students when confronted with a challenge develop their moral reasoning. Their growth is consistent with what Kohlberg observed, namely, that either a real or a classroom-induced moral dilemma has the capacity to produce development (Kohlberg, 1981, pp. 27-8, 146-7) However it occurs, cognitive dissonance may lead to upward development. Kohlberg observes that upward development is more a matter of changing the structure of thought "rather than the mere addition of more difficult content from outside" the student. (Kohlberg, 1981, p. 146) In other words, and similar to Perry's findings "a student's movement from one Position to another involves the reorganization of major personal investments." (Perry et al, 1968, p. 49) Students must rearrange their manner of thinking to meet the challenge that moral dilemma, with its cognitive conflict, poses. Rearranging thought, though, "involves risk, subjective and objective." (Perry et al, 1968, p. 178)

As noted above, students can willfully embrace the lower structures of thought. For Perry, lower stages include dualism, where "the world of knowledge, conduct and values is divided as the small child divides his world between his family and the vague inchoate outside" (Perry et al, 1968, p. 59), and multiplicity, where "no judgments about opinions can be made." (Perry et al, 1968, Glossary) In these stages, knowledge is treated as the province of the authority, such as a professor, and students believe every question has one right answer. Of course, students in the stage of multiplicity are career hazards to liberal arts professors since the latter grade opinions. If "no judgment among opinions can be made," then "the more reactive students see Authorities as imperialistically extending their biases and prejudices over the underdog's rightful freedom." (Perry et al, 1968, p. 99)

While it is true that rearranging the structure of thought is risky to the student, Socrates and others might point out that 'provoking' others to take those risks is even riskier. For example, students who are provoked may direct their frustration toward the professor.

Hence, Perry's and Kohlberg's work could be said to chart the comfortable plateaus on which people reside while they check their advance. For faculty teaching ethics, who typically receive students at Kohlberg's stages 3 and 4, but especially the "society maintaining orientation" of stage 4, the key is moving students toward independent, autonomous thought and action.

In stage 3, the "interpersonal concordance orientation, good behavior consists of pleasing others and gaining their approval. (Kohlberg, 1981, p. 18) As anyone who has ever observed teen-agers for a little time understands, in this stage, people follow peer pressure and conform to the group.

On the other hand, the stage 4 thinker is oriented toward rules and maintaining the social order for its own sake. Students in this stage make law-abiding, dutiful citizens though if questioned, they might not fully be able to articulate why. The short answer is the authority of laws and of social order.

Perry's analog for Kohlberg's stage 4 is what he calls the stage of relativism. In this mode of thought, the student believes that "all knowing and valuing is contingent on context." (Perry, 1968, 134) As Satris (1986) remarked, this structure of thought "is one of the most serious, pervasive, and frustrating problems confronting most philosophy teachers today." (193) Nonetheless, the relativity of stage 4—right and wrong is relative to the external environment—can become the more critical and other-directed stages 5 and 6.

The stage 5 or 6 thinker makes a "clear effort to define moral values and principles that have validity and application apart from the authority of the groups or people holding these principles and apart from the individual's own identification with these groups." (Kohlberg, 1981, 18) If Kohlberg is correct, students who aspire and rise to some semblance of critical thought, able to practice "detachment... able to stand back from oneself," (Perry, 1968, 35) more adequately works toward resolution of moral difficulty, despite challenges posed inside the classroom. That work has a chance to produce autonomous, principled conduct, based as it is in critical, cognitive analysis.

We see that both Perry and Kohlberg use the language of self-reflection, e.g., the word 'detachment.' Both use the language of critical thinking. Both suggest that the higher stages of thought demand more work of the person. Do students exhibit the general structures observed in Perry's work and Kohlberg's work? Is their work relevant to a person teaching ethics?

The Reality of Today's Students

If our experience is reliable, then students are indeed in Kohlberg's stage 4 and Perry's stage of relativism. Satris' observation still holds. We asked business majors in ethics classes, business majors in business classes, and science majors in science classes to respond to the question, "Can ethics be taught? If so, how? If not, why not?" Student responses (see appendices) show what professors face in the classroom. The responses reflect a wide range of students from two different courses at two different schools: a business ethics course and a chemistry course. We analyzed the responses and characterized the responses into three categories: multiplicity, corresponding to Kohlberg's stages 1 and 2; 'student' relativity, corresponding to Kohlberg's stages 3 and 4; and intersubjectivity or commitment, corresponding to Kohlberg's stages 5 and 6. Table 1 illustrates the classification system and sample responses.

Table 1
Classification System and Sample Responses

Classification	Kohlberg Stage	Sample Response
Multiplicity (M) (Student relativism)	1 or 2	Who's to say; Anyone has a right to their opinion
Cultural Relativity (R)	3 or 4	Ethics depends on your society; Morals are socially approved customs
Intersubjectivity (I) (Ethics as process)	5 or 6	What considerations made for ethical decision; There are some universal standards; Ethics are learned throughout our lives

The language of the student responses were analyzed in context. For example, the phrase, "A person's ethics may change over time," could indicate a student at the level of multiplicity whose ethics may change to suit the convenience of the situation. The phrase could suggest a student at the relativity stage who believes that society may change its standards over time, and that a person's moral standards must change accordingly. Or the phrase could represent a student at the highest stage, one who views ethical development as a lifelong process in which a person's moral standards develop and evolve.

It is interesting to observe that Kohlberg's stages one through four and Perry's first three stages of intellectual growth in the college years all include some degree of relativism. In Kohlberg's stages 1 and 2 and up to Perry's second main stage, multiplicity, ethics are thought to be relative to self-interest. In cultural relativity, ethics are relative to society, groups, or organizations.

The following table (see Table 2) provides sample responses of students at the stage of multiplicity. The phrases are indicative of the student's sentiment, but we classified the responses based on the context of the overall response.

Table 2
Responses of Students in Multiplicity Stage.

▸ Hard to teach an adult; adults simply do not want to be told what to do or how to act;
▸ People and most managers follow what feels right
▸ A person should be able to be more open minded about opposing ethical opinions
▸ Ethics and moral standards depend on the individual and their upbringing
▸ Everyone encounters unique experiences and has different values, so what one person deems ethical, another may think is unethical
▸ Every person has his/her individual feelings on what is right or wrong.
▸ I believe it is dangerous to teach ethical behavior because teaching one to behave in an ethical manner conflicts with human ability of free thought and reasoning.
▸ One has to make their own choices based on what they feel is right
▸ Each person can have his or her moral standards
▸ It is my feeling that we all have a set of ethics

The following table (see Table 3) provides various responses representative of cultural relativity in development and understanding.

Table 3. Responses of Students in Cultural Relativity Stage.

▸ Society . . . insight to what is ethically right and wrong
▸ Ethics can be taught but only within each culture; there is no global ethic that exists
▸ In our culture, children learn rules; Adults are also able to "learn" ethics by watching others and understanding social norms
▸ Violating a code of conduct that society has deemed unacceptable
▸ People don't come to ethical understanding on their own, they inherit society's standards
▸ Ethics is a very difficult concept to understand because ethics can differ from one group of people to another.
▸ These morals should closely relate to ethics of a society.
▸ Rules are made by businesses, government . . .
▸ Ethics is group morality

The following table (see Table 4) provides responses of students whose language suggests an intersubjective or committed level of development.

Table 4
Responses of Students in Committed Level of Development.

▸ People . . . find themselves in situations where those standards are challenged . . . may end up changing their point of view and possibly their ethics
▸ Ethics are learned and evolve through time from the moment a person is born. The process never stops.
▸ Develops ethics through a learning process ... and develops these ethics throughout their lifetime; by dealing with circumstances and learning from our mistakes, we continue to develop our ethics
▸ If ethical relativism were okay and there were no "universal moral standards," total and utter chaos would result and what happened September 11 would be justifiable.
▸ When faced with a decision a well-educated person will readily make a more educated and perhaps more ethical decision.
▸ A more effective way to teach ethics may simply be to have a discussion course of these touchy issues where each individual does their own research and thinking and then opinions are shared and thrown out to be either supported or shot down.
▸ I would like a class which teaches what ethics is, what is part of it, what is considered ethical, and what considerations must be made for an ethical decision.

Many students indicated that a person learns moral standards at a young age, i.e., during childhood. The implicit message was that adults could not be taught ethics. This attitude might indicate an unwillingness to learn ethics past youth, a phenomenon that would preclude professors being able to influence moral development and teach ethics. Some comments included: "The most influential time of a child is when they are young." "I think ethics can be taught, but it must be taught at an early age." Some students stated outright that ethics could not be taught.

Several responses indicated that knowing ethics and acting ethically are two different issues. These responses are consistent with the idea of moral sensitivity supported by James Rest, and also relate to Rest's concept of moral character. Moral sensitivity is a person's awareness of how actions affect others. Some student comments include the following. "Just because it can be taught doesn't mean that people will follow the correct ethics; it depends on the individual if they will follow them." "A general code of ethics can be taught. That does not, however, mean that code of ethics is always followed." ". . . whether or not the individual will make decisions based on the ethics he or she has been taught." "Knowing ethics however, does not guarantee an adherence to ethical behavior."

The responses from our students suggest that most students are at Perry's stages of multiplicity or relativity. Since there are few students at the advanced stage of moral development, we need to look for ways that we, as professors, can advance their moral development.

The Move to Moral Minimalism

If our student responses are typical, then the 'enemy' of an ethics class is ethical relativism in either form, i.e., ethical subjectivism or cultural relativity. The goal of an ethics class, by default if for no other reason, is to have students take seriously the notion of moral minimalism, the position that a floor of universal moral standards exists or could exist. We propose five strategies that can be used to move students towards moral minimalism, for, if a student thinks that there is a floor of universal moral principles, then the student is more apt to seek them and a professor more likely to have a critical and constructive classroom.

Given our student responses though, most students are unlikely to adopt moral minimalism by fiat. They might need to be shown two things: first, the pattern of thought they display; second, the inadequacy of relativism. A quick

pedagogical strategy to achieve both goals, that is, dispatch relativity and get students thinking seriously about ethics, is to assign the paper we assigned and read them carefully for their specific language. We advise assigning the paper on the first day of class so students can see immediately how they think.

A pedagogical consequence is that the assignment combats one of the strongest arguments students raise on behalf of ethical subjectivism. Students frequently argue that "ethics and moral standards depend on the individual and their upbringing," that "ethics cannot be taught because I believe that one's ethical values are a result of personal experience and morals, which cannot be taught," or that "it is very important to remember that different people have had different interactions in their lives, and therefore can have varying moral standards."

After reading a dozen or so examples of this response, it becomes obvious to the students that, while students "have had different interactions in their lives," students themselves exhibit patterns and think alike. In reading to students what they have said about how unique everyone is, students repeatedly encounter the same response. Further, the assignment invites a safe passage to the idea that ethics are universal and transcultural. What threatens students is the notion that 'universal' principles are the same thing as 'absolute' principles. One student thought it was "dangerous to teach ethical behavior" because it "conflicts with human ability of free thought and reasoning." Showing students that there is a consistent and predictable pattern of thought among their responses removes the threat to their freedom but retains the position that universal moral principles may exist.

If students see pattern in themselves, then they can understand the next and more objective pedagogical strategy, namely, showing that the social sciences work. The only way that the work of Kohlberg or of Perry can be meaningful is if people behave in generally similar and predictable ways. The social sciences work precisely because people are alike—even if everyone is raised in an individually unique fashion. What apparently is constant is the thought process in those different circumstances. It is an easy jump to maintain that moral thought is constant across individuals and cultures and, therefore, ethical relativism does not square with readily accessible, empirical information.

A third argument is now available. Once students are out of themselves and into the world of ideas, they can be shown anthropological conclusions. Every society favors honesty over deceit; every society has taboos about murdering members of the community; every society has some sense of property; every society has laws and rules. Societies could not exist without some minimal moral principles in place and when societies are compared, similar principles appear across cultures.

A fourth argument can now be offered: the Golden Rule appears across cultures. One way to have this lesson really sink in is to read variations on the Golden Rule and have the students identify the source. For instance, one source advises to "regard your neighbor's gain as your own gain and regard your neighbor's loss as your own loss" and another advises "do unto others as you would have others do unto you." Some sources state that "what you do not want done to yourself, do not do to others" and "as you deem yourself, so deem others." One source goes so far as to say that "None of you truly have faith if you do not desire for your brother that which you desire for yourself" and another source says "what is hateful to you, do not do to your neighbor." The sources—Taoism, Christianity, Confucianism, Sikhism, the Quran and the Talmud, respectively—suggest that cultures have the same broad moral injunction. The hunt for moral minimalism is not futile.

A fifth way to show the viability of moral minimalism is to ask students who their heroes are. Students will say their parents, other relatives, historical figures such as Jesus, Gandhi, or Mother Teresa, and teachers, coaches, and other important adults in their lives. Once the 'hero list' is on the board, students can be asked why the people are so designated. On what basis were the people chosen? Students will provide a laundry list of virtues, habits that are constructive to society and the individual. Those virtues are transcultural. The upshot of this exercise is that students see an objective basis for preferring one pattern of behavior over another pattern of behavior. This exercise is especially compelling when international students are in the class. Many Butler University students, classmates of a Kuwaiti student, respect the courage of Prince Faud of Kuwait's royal family.

In short, ethical judgment is possible, ethical relativism is inconsistent with normal, everyday experience, and the cardinal demand of ethical relativism, i.e., the universality of toleration, is incoherent, empirically misplaced, and finally, destructive in its consequent, miserable results. Why tolerate the behavior of Nazis, Osama bin Laden, or Jeffrey Dahmer?

We think that if students can be enticed into the position of taking ethical judgment seriously, teaching ethics and having engaged citizens will be both probable and productive. While the majority of students enter class as relativists, they are quite capable of leaving class committed to some sort of moral minimalism. If they commit to the possibility that a floor of universal moral principles exist, they are more likely to be civically responsible to others in the world.

Resources

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APPENDIXES

Appendix A
Student Responses from a Business Ethics Course

1. "Our way of thinking is shaped by what we are taught form the people around us, and this varies greatly from region to region...." "There will always be people with different moral standards..." "it is very important to establish and maintain certain global guidelines of what is ethically right or wrong in the business world, as long as it does not greatly benefit one side while significantly affecting the other."
2. "ethics...involves concepts that cannot be defined" "can ethics be taught.
3. "may not be gained through instruction... for example a personal code of ethics." "ethics are completely subjective" "one person's moral foundation, views of the world, religious beliefs...will never exactly match that of another person's"
4. ethics are taught by example
5. "ethics are personal beliefs as to what is right and what is wrong because ethics are different for everyone, a person's ethics cannot be considered correct or incorrect." "adults are taught ethics by providing information that forces them to revise their beliefs." "whether they truly believe in what the consider right or wrong."
6. "my morals will not be the same as everyone's" "ethics and moral standards depend on the individual and their upbringing." "one must be able to live with the choices and decisions he makes"
7. "take courses in ethics that challenged them to look at issues from a universal point of view." "most choices can be seen as both right or wrong"
8. "violating a code of conduct that society has deemed unacceptable" "parameters of what our culture has bound our ethics by"
9. involving consideration of others tale of process – development of awareness
10. "it all depends on the person or situation" "if there was some type of universal ethical code...what is excepted of them"
11. "people are not ethical simply because they were born with a greater sense of right and wrong. They are taught to behave in a certain manner throughout their lives. The ethical behavior that they demonstrate is a result of the moral standards that they have been taught." "This is not to say that many times morality and ethics teach the same things. I would just point out that they have different origins and are accepted differently depending on the groups."
12. "Everyone has their own personal ethics to abide by" "there are universal moral standards" Osama bin Laden-> "A set of universal moral standards must be created" "Each person has their own set of ethical standards that they feel are correct, but we must remember to continue to hold universal more standards to unite us"
13. "people don't come to ethical understanding on their own, they inherit society's standards"
14. "A child has to make up their own mind if the believe that same grounds for ethics, because this varies for each individual" "People's ethics and morals vary, not one individual is alike so neither should their beliefs"
15. "A child is taught how to express there emotions in acceptable ways that adhere to the accepted morals or standards of society" "morals are not absolute in that they change from culture to culture and over the course of time."
16. "A child learns from all these outside factors what is considered right and wrong." "ethical values" "Children are exposed to many contributing sources that reinforce ethics (more specifically what is socially acceptable)...today students are being taught in classes...to reinforce their moral standards."
17. "Everyone encounters unique experiences and has different values, so what one person deems ethical, another may think is unethical. There is not the sacred book of ethics that we can all pick up and read." "we can teach ethics by instructions how to think ethically and rationalize all decisions" "Their surrounding will dictate appropriate standards to follow. However, everyone must decide whether or not to apply ethics that they have learned."
18. "What the person might find offensive or harmful might not be to another individual...it is important to remember to rationally examine the given situation by determining the moral obligations that are expected."
19. "ethics cannot be taught because I believe that one's ethical values are a result of personal experience and morals, which cannot be taught." Experience teaches ethics (not books) "I interpret"... epistemological solipsism
20. "our ethical standards are rooted in history and tradition." "the concept of ethics is viewed differently by groups of people and even individuals." "There is perhaps no other issue, save religion, which lends itself to relativism. A common notion is that ethical standards are to be adaptable to each individuals lifestyle. Unfortunately many people prescribe to this idea resulting in a variety of views on an issue that seriously needs a uniform standard." " There is really no solid way to get around this argument" i.e. that ethics differ individual to individual.
21. "Ethics and morals are something that are unique to every individual..." " As we begin to decipher between right and wrong, we establish our own unique ethical structure that guides our decision-making process throughout life." "we begin to adapt ethical standards to fit our own personal identity and character"
22. "looking at case studies...forces the student to analyze a situation and look at the problem from a 'universal point of view'(www.scu.com)"
23. "Ethics is a very difficult concept to understand because ethics can differ from one group of people to another." "what is reasonable is always debatable, and who is to determine what is reasonable and what is poor reason." "who is to tell me how to live my life?" "I feel confident that we can successfully present all sides to a debate and decided what works best for us as individuals, or us as a group, but we should never attempt to solve what works best for the whole."
24. "what each and every person does with his or her education is irreverent." "many people never grasp the learning or decide to act indifferently."
25. Adults "discern right from wrong...creating their own system of ethics." The children learns from parents but as an adult, "will review this ethical system and alter it as they see fit." Yet: this student sees ethics developmentally and sees the inadequacy of stages 1 and 2
26. "each person individually defines ethics and it is my belief that ethics cannot be taught" "every individual has his/her personal feelings on what is right or wrong." "because one gets his/her ethics from his/her feelings, and since feelings cannot be taught, it makes teaching ethics impossible." "each individual has a unique lifestyle" "There are no two people that have the exact feeling on a subject"
27. "ethics can be taught because ethics is the study of morality, rather than morality itself" "figuring out how someone can learn ethics is similar to how someone learns to study other sciences."
28. "society will often have an idea of what the norm should be for a certain ethical standard. If thus will seek to enforce this standard upon those that live within this society. The majority will soon adapt rather than be considered to be outside of the societal norm."
29. "everyone has his or her own set of personal ethics that they feel are a fair standard to live their life by, whether it is right or wrong" after a textbook definition of ethics-" This basically says to me that everyone has standards or beliefs that they have adopted that helps them decide what is right or wrong." "A decision is measured right or wrong based on personal and society standards...The problem is people have different sets of standards." "Each individual decides what is the right decision for them even if it is wrong"
30. "I will attempt to look at the external influence that help us form our moral beliefs." After stating that changes occur->

"although I personally have always believed that you are born either 'good' or 'not-good'"

31. "we are all taught different things at young ages because everyone has different standards and ideas of what is right or wrong." "inspirational people in children's lives may have different opinions of what is right and wrong"-> so exploration of ethics is hard for children "there is no list of right and wrong things" "I have to develop what I feel is good ethical behavior." "there is no ethical behavior and unethical behavior and the definitions of these are different to many people in the business world."
32. Very textually driven/ sees that ethical judgments differ
33. "I am aware that although morality is the basis of ethics, there cannot be the presumption that morality does not define ethical. For that to be true there would be cultural specific ethics."
34. Ethics can be taught "People are taught and learn ethics by growing up in their families, friends they hang around with, and…the community."
35. "when faced with the question whether or not ethics can be taught I am filled with mixed emotions." "to me, ethics is the decisions a person makes based on their beliefs of what is right and wrong." "the right decision to some may not be the right decision to others." "Ethics is a gray area that should be given serious thought."
36. "Everyone has their own set of ethics" Ethics" is a continual learning process throughout life."
37. "Ethics simply take the morals that we have made for ourselves and puts them in a different perspective" "This will allow them to begin to learn what is ethically right or wrong for them" ['this' = experience] "everyone has their own ideas of right and wrong" "The teaching of ethics needs to start with ideas that everyone knows are right and wrong."
38. The definition of ethics "is very broad but that leaves room for each individual to develop their own special code of ethics that best fits their profession." "You have to develop your own code of ethics that best works for you, but you have to define that code on the basis of morality."
39. " How can we even know that one thing is right and the other is not with first going through that exact experience?" "one person's set of ethics may differ from another's and we can never really say who is right or wrong."
40. Ethics can be taught/ analogy to religious conversion
41. "Every person's ethics is a thing that is created from the morals of that particular person." "Every person has morals one way or another." The culture we grow up in establishes our morals.
42. No indicators
43. "Shakespeare, in his play HAMLET, wrote 'to thine own self be true.'" "A person ethics are often his own compilation of various existing moral tenets." "The person alone must guide the development of his ethics…these chosen ethics must fit with the lifestyle the person has selected." "knowledge about ethics serves to make people understand that fundamentals of what ethics really are."
44. "I am first going to discuss ethics and morals and my opinions and definitions of the two." "In my opinion…" "To me, …" "personal morals" "By this time, hopefully, a person has the basic ideas of right and wrong in their minds." "An individual uses their person morals when making this decision" "one's morals never change." "morals are something that is personal to you…ethics are more social and related to society."
45. "Ethics can be taught to people, but it is very important to remember that different people have had different interactions in their lives, and therefore can have varying moral standards." "I feel…." "even though in some circumstances there are universal moral standards such as one should not murder." "A person can be taught…but in the end the final decision is a personal one." "Ethics can be taught to a very diverse group of people through the discussions of universal morals." "On the other hand, other moral principles are not universal."
46. "If morals had no been taught…we would have no standards to conclude that acts of terrorism are evil. The rescue efforts of thousands of firefighters would not be seen as good either."
47. "Actually learning and practicing good ethics is one hundred per cent completely up to the individual." "which ethical approach chosen is right and which ethical approach chosen is wrong is a debatable topic." Ethics "can be taught if done tastefully and thoughtfully." "Ethics should be taught as a subject that has no final answer." "The fact that what is right for one person is not necessarily right for the next" "there is no real way to say what the best answer is" profs should teach that "There are no right or wrong answers." There are "no completely correct answers but yet some that are better than others."
48. 'good' and 'right' "have different meanings for all people." "Although ethical behavior may mean something completely different to each individual it is something that can be taught to a willing mind." "many people…have different views on what ethical behavior is." "common ground" <- people can agree "Although no one will ever agree on what is good and right, it doesn't mean that you should not bother teaching or learning the basis of ethical behavior." "No two people will ever have the exact same views on what is ethical" "the idea of what is good and right"-
49. Kohlberg->"at the post conventional level, a person starts defining what is right and wrong from a universal point of view rather than from group norms or loyalties" "Ethics can be taught. It transcends through culture…its boundaries are without limit with reference to religion or race."
50. "People need a set of skills that enable them to arrive at answers and make decisions for themselves that they feel are ethical, rather than a set of answers provided by someone else." Kohlberg- "The adult at this level develops moral principles that define eight and wrong from a universal point of view." Ethics courses-> universal point of view is placed before students --plagiarism—
51. "If ethics cannot be taught, the ethical relativism is okay." "If ethical relativism were okay and there were no "Universal Moral Standards, total and utter chaos would result and what happened September 11th would be justifiable."
52. "I feel however that you cannot teach people to be ethical, but you can teach them what is ethical." Discussion of Kohlberg in the paper/ no mention of the word 'universal'
53. "The outcome [of learning ethics in a class] wholly depends on the person" "an ethical perspective" "By saying that ethics cannot be learned is not taking responsibility for your own decisions."
54. "Ethics is a set of standards that is obtained at a young age and then continuously reinforced through experiences in life." Note: The student is unaware that ethics come from within or that they change
55. Every individual analyzes every situation differently.
56. " There are no concrete answers to what is right and what is wrong. These vary by cultures and societies, even neighbors." "Because of the obscurity in the determination of right and wrong caries between people and cultures. Moral standards cannot be taught." "Standards are observed and internalized." "assuming right and wrong could be defined and moral standards could be taught, it would still be impossible to teach ethics." "There is no clear definition of right and wrong to set moral standards."
57. "Accepting that ethics can be taught just implies that you can stand back and observe your morals in a comparative and analytic way."
58. Everyone has their own definition and their own views on what is considered ethical behavior and what is nor." "who says what is right or wrong?" "everyone… shares different views on what is right and what is wrong" "there is no clear black and white definition of what constitutes as ethical."
59. Each person has different ethics and no one person's ethics can be labeled as right or wrong "no two people have the exact

same ethical beliefs." (after repeatedly asserting that children have the ethics of their parents) he sees the problem but does not see the solution

60. "it may take many years for a person to believe and follow the ethical standards of society." "it is a person's choice as to whether or not he is going to be open to society's moral standards."
61. "ethical codes, from one culture to another, are more alike than different people" invoking golden rule for all societies clear understanding of universal ethics
62. "argument occurs because ethics means different things to different people" ethics begins when we critically examine the moral standards we have accepted from family, friends, an society ethics is life long "business activities cannot exist unless some minimal standards of ethics exist."
63. The question of right and wrong "I believe ethics can't be taught in its entirety, but people can be made aware of the values and regulations and the punishments that would result of those guidelines weren't followed." Teaching ethics: ultimately the student… must be willing to accept that material."
64. "The real question is who is right or what should everyone be striving for." <- sees problem/ can't articulate well
65. "ethics is difficult to define because ethical behavior denotes different meanings to different people" lets talk about childhood as the base for future decisions
66. "As each person matures he/she develops a personal set of values of what is ethical or not. What might seem ethical to some may seem the opposite to others. For example it is almost a universal rule of ethics not to kill another human being. Yet, some, like the followers of Osama bin Laden…" "Each person has different backgrounds and this creates different views of ethics…"
67. "We learn from our friends, peers, and mentors in adolescence what is perceived as right and wrong." "… religion, morality, and the golden rule. Studying these sources can supply the basic standards for evaluations ethical versus non-ethical decisions." "Each person has different backgrounds and this creates different views of ethics…"
68. "I think people have values and morals that they go by and those are impossible to change for anyone." As I grow older, I "changed a few of those values" That I learned from my family what's legal-what's ethical]- The student sees this point.
69. With corporations going globally, it can even be harder to distinguish what is ethical because culture moral change that are created. Where in the United States to torture women is wrong, in Afghanistan is not." (written by a foreign-born student – hence the language is a second language)
70. "Every person has his or her own ideas about right and wrong as well as what is fair and unfair. No matter what each individual may inherently believe, it is critical that he or she strictly adhere to those beliefs in all situations are encountered." "we are mature enough to develop our own versions of ethical standards." "we must learn to create our own values." "whether this is ethical in the business world is in the eye of the beholder."
71. "The best teachers can be people we look up to… it is really hard job to do because many times they do not know exactly what is ethical or what is not." "it is sometimes very difficult to figure out what the right thing to do it." From a foreign student/ ethics = knowledge
72. "Ethics are a set of morals and values that everyone possesses. However, everyone has a different set of morals and values… most people have a relatively similar set of ethics but not all." "every person who enters the business world will bring their own ethics."
73. Everybody has their own set of moral standards, each society has its own moral standards, too, which allows for a wide variety of personal ethics. "The key to teaching these ethics is to provide more or less a system of guidance that someone can choose to follow or not follow."
74. "…Whether these [moral] standards are reasonable or not. This is determined by the individual situation that is being faced by the person or organization." Kohlberg's stage 5-> The person sees the conflicting views; "all of these views and beliefs should be accepted in society." 4 x "I feel…" people can "determine morals of their own." "The topic of ethics is very difficult to pinpoint and to understand."
75. "Everyone has personal ethics to which they adhere. The grounds by which these personal ethics are made or learned differ from person to person." "whose personal values should the business reflect?"
76. "Without ethics in business… everyone would be acting in an unethical manner, or personal manner." Ethics "is a topic that requires both diligence and careful examination." "it is possible to make a student aware of the 'proper' or 'acceptable' ethical standards one should abide by."
77. "What we determine as right and wrong become our set of ethics that we live by." "an individual can be taught what ethical behavior is considered to be by another individual, but in the end, people must determine their own ethical standards" "how people develop their set of ethics is much like picking out your clothes…The ethics you have in your own life fit you and who you are." "There must be moral standards that are developed and followed."
78. "Ethics is a very gray subject." "I also believe that people's ethics are different all over the world." "You have to have someone there to tell you what is right and wrong according to what your society believes in."
79. "Ethics are the principles and morals that are norms in society." Law "is the glue that hold society together."
80. Ethics "The teaching of it is often tricky due to its subjective concepts" "one's person's specific code of ethics is most likely to be different from anyone else's" Student: society and people usually have similar ethics though "How is it possible to reconcile the differences?" "an easy starting point is to draw common beliefs…but it is often the case that no town people feel exactly the same concerning any given issue." "but the moral reasoning used to determine whether something is right or wrong should be employed using similar methods by every student" "These individuals should use their moral reasoning capabilities to judge whether given behaviors and choices agree or disagree with a particular set of moral standards."
81. "The first step is to educate our society about what is socially appropriate in the real world." "anyone …can easily be educated about what is ethically acceptable in society." "teaching ethics is simply studying morality and applying it to social situations." "When teaching ethics, it is important to accept and acknowledge all different views and opinions from there, emphasis should be on certain moral standards that would be accepted in society."
82. "Each and everyone of us have our own definition of ethics resulting in a difficulty to determine a standards code of ethics for society in general." "can this morality be taught and understood by everyone so that there is one code of ethics for this great nation." "because these standards vary from person to person, it creates the challenge of having one set code of ethics that we all follow."
83. "But no one can say which of us is right or wrong. Our views are what we feel as being ethical."
84. "everyone has a different standard of what is acceptable."

Appendix B: Student Responses from a Chemistry Course

1. Note some anger "Each person can have his or her moral standards"
2. group invoked: "majority rules" "ethics is group morality" yet, "ethics is...a very individual idea"
3. "society or government..."
4. can't teach by lecturing; teach by example, especially from parents
5. no clear or useful indicators or language
6. "it is my feeling that we all have a set of ethics..." parents
7. ethics requires openess and will; ethics involves "a thought process"
8. "a person's moral beliefs come from family"
9. knowing ethics does not equal being ethical
10. ethics can only be taught at an early age "morals should closely relate to the ethics of a society"
11. "rules are made by businesses, lawmakers..." for this person, rules are outside or external to the individual
12. "can instill ethics in others by expressing how they feel..." It's "up to the individual to agree or not"
13. "a well-educated person is more likely to be ethical" "society influences ethics, too, though"
14. handwriting too hard to read
15. "a set of ethics must be consistent"; ethics are "taught at an early age"
16. "ethics can be taught to certain extent"; doing is not the same as thinking
17. respondent suggests that people should assume personal responsibility for moral decisions; ethics are learned from birth "through our entire lives" "decisions must have support"
18. parents invoked; development is observed in people
19. I'd like "a class which teaches what ethics is, what is part of it, what is considered ethical, and what considerations must be made for an ethical decision"
20. "Teaching a person ethics is like teaching a person faith. It cannot be done." (intractable isolation/retrenched multiplicity)
21. "I'm not sure." We must "uphold the dignity of humanity and nature."
22. "ethics can be learned but not taught... learned by observation"
23. "society and government..." "everyone has their own idea about ethics"
24. "the will to learn is key" respondent states that people can't/don't change their character
25. ethics is taught by mentors
26. "ethics are 'formed' at a young age"
27. "ethics is something that can never be taught" "ethics is inherent in all individuals"
28. "...code of ethics are the laws that you agree to follow"
29. "I don't think a person can be taught to be ethical."
30. "parents..." reinforced in classrooms "It's the little voice that tells you..."
31. "No, no one can tell you what to do"
32. "You can clue people into behavior and mannerisms that are acceptable"
33. "Ethics can be taught...the rules you should follow and why can also be taught" "No teacher, especially at the collegiate level, has much of an impact in the development of a person's ethics."
34. Ethics are "the principles or standards of human conduct" people must be open and willing to learn"
35. "environment teaches..." "in the end, everyone has to make their own choices based on what they feel is right"
36. "culture teaches..."
37. "society..." the will is important
38. Ethics is "what society in general believes to be proper" Ethics are "hard to teach because students are not faced with ethical challenge"
39. "Everyone has their own beliefs and opinions"
40. "It is dangerous to teach ethical behavior" because it "conflicts with human ability of free thought and reasoning." Ethics is "collective morality"

Antecedents of Motivation to Learn in a Technology-Enhanced Learning (TEL) Context

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ABSTRACT

Motivation to learn has been of interest for several decades across both academia and industry. However, a review of the literature reveals a considerable gap in the literature regarding motivation to learn in a technology-enhanced learning (TEL) environment. Using a sample of college students (N = 173) enrolled in an undergraduate computer information systems course, results showed that students' structural expectations of having available resources and content reinforcement significantly influenced their motivation to learn the course content; however, their expectations of having supportive interpersonal relationships did not. Furthermore, age moderated the relationship between reinforcement expectations and motivation to learn, suggesting that student learning schemas in a TEL context develop and are refined over time.

Introduction

The use of technology-enhanced learning (TEL) systems in industry and academia is rapidly becoming commonplace due to the increasing need for training and development, and because of the ever changing nature of the learning environment. In industry, TEL has been viewed as a means of minimizing training costs and workflow interruptions typically associated with traditional classroom-based instruction (Rainsford & Murphy, 2005). More recently, researchers have emphasized the mutual dependency between TEL and business process management activities (see Capuano, Gaeta, Ritrovato, & Salemo, 2008).

In higher education, technology has been viewed as an important means to actively engage learners and to present curriculum in a variety of ways in order to increase learning (Jackson, Gaudet, McDaniel, & Brammer, 2009). Also, students increasingly expect more integration of technology into their learning experience (Feiertag & Berge, 2008). For example, Jackson and Helms (2008) noted that TEL in the learning environment is the outgrowth of a massive techno-centric cultural and generational shift towards technological integration into our daily lives. As such, the adoption of blended learning instructional designs (see Bersin, 2004; Mackay & Stockport, 2006) continues to make significant inroads in most higher education learning environments.

Overall, TEL has been viewed in general as an effective way to increase instructional program flexibility (see Noonan, 2008) and thus provides more opportunities for learning and increased learning success in a variety of academic and industrial settings. As such, TEL systems are expected to play an increasingly central role in instructional program design (see Jackson & Helms, 2008; Schneberger, Amoroso, & Durfee, 2007).

Individual Differences in Learning

Of particular interest to educational and industrial researchers and practitioners is how to improve the effectiveness of technology-enhanced learning (TEL). As noted by Graff (2006), individual's internal representations of web-based learning systems are a significant influence on learning outcomes, and are to a great extent the product of their cognitive style. Thus, the majority of research on TEL effectiveness in education and training appears to be focused on individual level processes and performance outcomes (see Little, 2002). As such, many education and training professionals agree that individual differences (Graff, 2006) and even generational attitudes (Jackson, Gaudet, McDaniel, & Brammer, 2009) of learners should be considered when designing a web-based learning system.

Although individual differences have been recognized as salient factors for learning success, it is surprising that little to no research has been devoted to assessing attitudinal influences of motivation to learn within a TEL environment. What may be contributing to this oversight is the entrenchment of the traditional model of education which relies on lecture-based instruction and pre-determined lesson plans (see Jackson et al., 2009). Therefore, this study examined the relationship between key aspects of a student learning 'schema' and motivation to learn in a technology-enhanced learning (TEL) context.

Motivation to Learn

Motivation to learn has long been considered a predictor of learning outcomes in both academic and industrial settings, and has been defined as a specific desire to learn the content of an instructional program (Noe, 1986). As such, numerous studies have examined the antecedents and outcomes of motivation to learn in a variety of organizational (e.g., Baldwin & Ford, 1988; Baldwin, Magjuka, & Loher, 1991; Colquitt & Simmering, 1998; Goldstein & Ford, 2002; Harris & Cole, 2007; LePine, LePine, & Jackson, 2004; Tannenbaum & Yukl, 1992) and academic settings (e.g., Cole, Harris, & Feild, 2004; Lilly & Tippins, 2002; Klein, Noe, & Wang, 2006; Noe, 1986; Tsai & Tsai, 2004).

Specifically, we propose that internal representations represent learning 'schemas' which may underlie an individual's motivation to learn; however, it does not appear that any study until now has examined the influence of established antecedents of motivation to learn in a TEL context.

Schemas

Schemas have been described as a generalized cognitive framework that individuals use to impose structure on, and ascribe meaning to, information about a social situation in order to better understand that situation. Taylor and Crocker (1981) described the role of schemas as providing a structure against which experience is mapped, affecting information processing efficiency and speed, guiding the filling of gaps with available information, and facilitating the evaluation of experience. Schemas also provide individuals with a knowledge base that facilitates the interpretation of information, actions, and expectations (Gioia & Poole, 1984).

According to Gioia et al, schemas influence how individuals make sense of a current situation, or may provide individuals with a 'mental map' which enables them to predict events, behaviors, or even the sequences of events or behaviors. Furthermore, previous research (see Quinones, 1995; Smith-Jentsch, Jentsch, Payne, and Salas, 1996) observed a relationship between past learning outcomes and future motivation to learn.

Finally, Harris (1994) noted that schemas may be widely shared among members of the same organization, based on commonly accepted meanings, in order to achieve a predictable social order. This suggests that a 'learning' schema may be shared among individuals with similar backgrounds such as members of the same organization or classmates in an academic setting.

Learning Schemas

The nature of a learning schema in particular, can best be conceptualized by what Harris (1994, p. 310) described as a "college class" schema where a student may possess tacit knowledge regarding the typical attributes of the class such as the instructor, other students, the classroom itself, reading material, and exams. He also noted that such schemas provide students with guidance for understanding how those attributes are expected to interrelate.

In education and training contexts it is likely that individuals possess a common set of pre-determined expectations (see Gioia & Poole, 1984; Harris, 1994; Sutton & Louis, 1987) of traditional learning environments. Yet contemporary instruction programs that incorporate TEL systems may not readily fit into such a schema, and those expectations may not conform to what is experienced in the new learning situation. Thus, in selecting the antecedent variables for this study, consideration was given to the precedents that learner reactions to a TEL system depend on both the individual's cognitive style as well as the social aspects of the learning environment (Graff, 2003; Rovai, 2002). For example, Jackson and Helms (2008) found that students perceived a lack of interaction with faculty as a weakness in a blended learning course.

In addition, Graff (2006) noted that investigations in a computer-based delivery context should use measures that are independent of attitudes regarding computer-based delivery per se. Thus, the current study focused on generalized constructs that were either structural (i.e., dependent upon the course design and the resources that were made available to students) or social (i.e., the opportunity to interact with others) that we felt best represented a typical TEL environment. These factors were based on factors of learning motivation described by Noe (1986) and included having available resources, requiring no more than a reasonable amount of effort to be successful, having opportunities to reinforce the learned content, and having opportunities for open communications and feedback.

Hypothesis 1: Students' expectations of having available resources will be positively related to their motivation to learn in a TEL context.

Hypothesis 2: Students' expectations of effort reasonableness will be positively related to their motivation to learn in a TEL context.

Hypothesis 3: Students' expectations of content reinforcement will be positively related to their motivation to learn in a TEL context.

Hypothesis 4: Students' expectations of having supportive interpersonal relationships will be positively related to their motivation to learn in a TEL context.

Moderating Effect of Age

Because motivation to learn occurs at the individual level and is to a large extent a function of cognitive information processing and sense making, learners can be expected to have different levels of expectations of the TEL instructional program based on factors such as their age. To date, only a few studies were found that had examined the relationship between age and motivation to learn. For example, Cheng (2007) found a relationship between age and motivation to learn whereas Niessen (2006) did not. As for its ability to influence the learning process, age was shown to negatively influence participation in non-mandatory training situations (Renaud, Lakhdari, & Morin, 2004).

Studies that examined the moderating influence of age on antecedent relationships with motivation to learn are even more sparse. At the time the current study was conducted, only one study was found that directly examined the moderating influence of age on antecedent relationships with motivation to learn. Specifically, Webster and Martocchio (1993) labeled job tasks as 'play' for younger employees, and 'work' for older employees. Their results showed that age moderated the relationship between task label and motivation to learn.

These authors' study was very similar overall to the current study in that the authors described what could be considered a 'job task schema' in much the same way that we conceptualize a learning schema. Therefore, we would expect age to observe a similar moderating influence on the relationship between learning schema factors and motivation to learn.

Hypothesis 5a: Students' age will moderate the relationship between resource availability expectations and motivation to learn in a TEL context.

Hypothesis 5b: Students' age will moderate the relationship between effort reasonableness expectations and motivation to learn in a TEL context.

Hypothesis 5c: Students' age will moderate the relationship between feedback expectations and motivation to learn.

Hypothesis 5d: Students' age will moderate the relationship between supportive interpersonal relationship expectations and motivation to learn in a TEL context.

Methods

Sample and Setting

Undergraduate students (N = 173) of a mid-sized regional university located in the southeastern United States who were all enrolled in the same computer information systems course participated in this study. The learning objectives of the course focused on mastery of business applications of microcomputer software. In addition, the instructional design for the course was structurally regimented and delivery of the course content was primarily through an interactive web-based program. The average age of all participants was 20 years old (SD = 3.19) with an age range from 18 to 36. Gender for the total sample was roughly equal where (52%) were male and (48%) were female.

Measures

Motivation to Learn

Students' motivation to learn was measured using 6 items derived from the 8-item scale developed by Noe and Schmitt (1986) and used in prior motivation to learn research (e.g., Noe & Wilk, 1993). The wording of several of the Noe et al (1986) items was changed to reflect the context of this study such as "I am motivated to learn the skills emphasized in this course." Participants responded on a 5-point agreement scale, ranging from 1 (strongly disagree) to 5 (strongly agree). As shown in Table 1, motivation to learn in the current study had an internal reliability estimate of (α = .79).

Learning schema attribute

At the time of this study, no prior research was found to have empirically examined the relationship between learning schema expectations and motivation to learn in a technology-enhanced learning (TEL) setting. Therefore, we developed a set of dimensional scale items and conducted a pilot study using a sample of students enrolled in an upper level business communications class. Theoretical guidance for the development of the learning schema scale items used in the pilot study came from the motivation to learn antecedents outlined by Noe (1986), and from insights gleaned from prior motivation to learn studies (e.g., Noe & Schmitt, 1986; Noe & Wilk, 1993).

Table 1
Means, Standard Deviations, Intercorrelations, and Coefficient Alphas for Study Variables

Variable	M	SD	1	2	3	4	5	6
1. Motivation	25.53	2.89	(.79)					
2. Age	19.93	2.94	.21**	(--)				
3. Resource availability	12.75	2.02	.42***	.01	(.79)			
4. Effort reasonableness	10.87	1.99	.03	.25**	.27**	(.50)		
5. Reinforcement	12.16	1.76	.51***	.52***	.21*	.21*	(.65)	
6. Supportive interrelationships	25.27	3.78	.45***	.05	.63***	.25**	.57***	(.78)

Note. N = 173. Reliability coefficients are reported on the diagonal.
* p = < .05, ** p = < .01, *** p < .001

The learning schema attribute scales developed for the pilot study were then used to measure students' learning schema attribute expectations in the current study (N = 173). Using a 5-point agreement scale, ranging from 1 (strongly disagree) to 5 (strongly agree), students rated the degree to which they expected resource availability, effort reasonableness, reinforcement, openness of communication, and feedback to be present in the course for which they were enrolled. Chronbach's alphas of the variables for the sample in this study were .79, .80, .65, .73, and .85 (respectively).

Because we felt that feedback and open communication were conceptually similar, these factors were formed into a composite variable we labeled supportive interrelationships. In order to assess the construct validity of the supportive interpersonal relationship composite variable used this study, a principal-components analysis was conducted using varimax rotation. The results of the analysis revealed a single factor where both of the rotated values of the factor loading were greater than 0.90, and the overall reliability estimate was (α = .78).

Procedure

Students were asked to complete the survey on the first class meeting for the spring semester term. The survey was administered before the instructor discussed the course syllabus, course requirements, grading rubric, and general course information was provided. Thus, students had no specific information about the course or the instructor prior to completing the survey. Participation in this study was completely voluntary and no promises of extra credit or other rewards were made.

Results

For this study, all hypotheses were tested using hierarchical regression. The hierarchical regression procedure was used because it allows for causal priority to be defined by the researcher. By doing so it also allows for incremental validity to be assessed, and it is more effective at removing spurious relationships (see Cohen & Cohen, 1983). A summary of the means, standard deviations, intercorrelations, and reliability estimates for each variable in this study is presented in Table 1.

Hypotheses 1 through 4 reflected the proposed relationships between the learning schema attributes and motivation to learn in a TEL context. As shown in Table 2, expectations of the availability of resources (β = .25, p >.05) and reinforcement (β = .66, p >.001) were significant,

Table 2
Results of Moderated Regression Analysis

Variable	Motivation to Learn
	B
Step 1:	
Age	.08
ΔR^2 after Step 1	.04*
Step 2:	
Resource availability	.25*
Effort reasonableness	- .16
Reinforcement	.52**
Supportive interrelationships	.13
ΔR^2 after Step 2	.31***
Step 3:	
Age X Resource availability	-.05
Age X Effort reasonableness	-.00
Age X Reinforcement	.10**
Age X Supportive interrelationships	-.01
ΔR^2 after Step 3	.04*
Overall R^2	.40
Overall Adjusted R^2	.36
Overall F	11.86***

Note. N = 173. β is the unstandardized regression coefficient.

All interaction variables are centered.

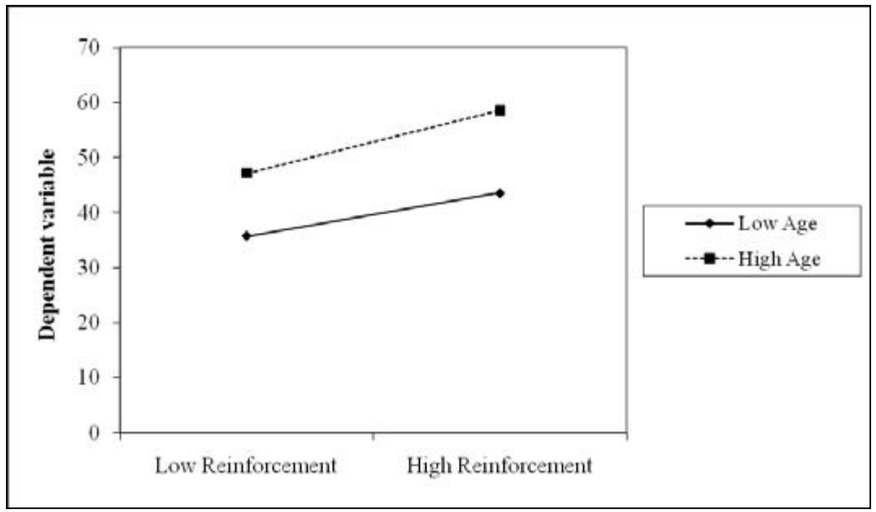
All β's are from the final model. All tests are two-tailed.

* p < .05, p < .01, *** p < .001

and hypotheses 1 and 3 were supported. The hypothesized relationships between expectations of effort reasonableness (β = .13, p <.05) and supportive interpersonal relationships (β = .13, p <.05) were not significant, and hypotheses 2 and 4 (respectively) were not supported.

Hypotheses 5a through 5d examined whether participant age moderated the relationship between the learning schema attributes and motivation to learn. As shown in Table 2, students' expectations of having resource availability (β = -.05, p >.05), effort reasonableness (β = -.02, p > .05), or supportive interpersonal relationships (β = -.01, p >.05) did not significantly interact with participant age. Therefore hypotheses 5a, 5b, and 5d were not supported. However, the relationship between expectations of content reinforcement and motivation to learn was significantly moderated by student age (β = .10, p <.01) and hypothesis 5c was supported. Further support for hypothesis 5c can be seen by the non-parallel lines in the interaction plot (Figure 1.1) which shows a mild interaction of student age on the relationship between motivation to learn and content reinforcement expectations.

Figure 1
Interaction Plot of
Age X Reinforcement Expectation



Summary

Discussion

Demands for training combined with increasing time and cost constraints have led to the dramatic rise in technology-enhanced instruction (TEL); however, previous research had not addressed how this new breed of instructional program might relate to traditional antecedents of an individual's motivation to learn. Therefore, the aim of this study was twofold. First, we empirically tested the relationships between key attributes of a learning schema and student motivation to learn among college age students in a computer systems course. Overall, we feel that this goal was accomplished and a clearer picture of the structure of a student learning schema within a TEL context was revealed.

Specifically, when the instructional program is designed to be administered in a highly systematic and technology-driven manner, and where the content being learned is not open to individual interpretation, it appears that students' motivation to learn is influenced more by the structural (i.e., resource availability and content reinforcement) than the interpersonal elements (i.e., open communications and feedback) elements of the learning schema.

It is important to note that we were unable to form a complete picture of the learning schema in this study due to the low reliability coefficient observed for the effort reasonableness variable (α = .50). This suggests that the effort reasonableness antecedent may not be as generalizable as others, and further development of scale items is needed. Also, because this study focused on a general computer information systems course, it is possible that students' effort reasonableness expectations may have been of more concern in more advanced courses where course content and rigor are increased. In other words, expectations of effort reasonableness may be less generalizable across learning situations than resource availability and interpersonal support. Therefore, future studies may benefit by adopting the experimental approach of Webster and Martocchio (1993) by examining whether categorizing a course as either 'introductory' or 'upper level' has an effect on effort reasonableness expectations.

The other major aim of this study was to support the general notion that learning schemas continuously develop and are refined through individual experience. Thus, we hypothesized that the attributes of the learning schema would be influenced by student age since older and presumably more experienced students would be expected to have more clearly defined expectations of a learning context than their younger and less experienced peers. Because at least one of the learning schema attributes in the current study demonstrated only a mild interaction (i.e., the relationship between student expectations of content reinforcement and motivation to learn was moderated by student age) we cautiously assert incremental evidence to support the idea that learning schemas are in fact dynamic.

In sum, this study represents an important step towards understanding the nature and relative importance of specific expectations of learners on their motivation to learn in an increasingly popular technology-enhanced instructional (TEL) program design. The major implications of this study are that students' learning motivation in a TEL context might be influenced more by structural than interpersonal expectations, and that past learning experience has an influence on motivation to learn in the present.

Limitations

There were several limitations in this study that need to be mentioned. First, the potential for common method bias was of concern because students' completed the survey in one administration. Second, the sample used in this study reflected only one of many potential learning situations. Because the course in this study pertained to learning basic computer operations, the course content was highly standardized and all students were expected to perform the same learning tasks. Many other courses would not be expected to be as standardized and regimented. Caution must be taken when drawing inferences about the results of this study and when making generalizations to other learning situations.

Finally, the participant sample was drawn from different sections of the same course where there were several different instructors. In order to minimize potential confounds to the study, the survey was administered to all participants at the beginning of the first day of class before the instructors provided any course information or syllabus review. Still, the possibility that instructor differences may have had some influence must be considered.

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