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COMPUTER INTEGRATION IN THE ACCOUNTING CURRICULUM: TRENDS AND ASSESSMENT

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ABSTRACT

In its Educational Competency Assessment (ECA) website, the AICPA presents a Core Competency Framework that includes “leverage technology” as a core competency for students preparing for a career in accounting. The ECA framework further specifies “elements” to describe what the student should be able to do to show that he/she has mastered this core competency. Each element is assigned a skill level, with Skill Level 4 “Integrating” elements being mastered through sequential development across the curriculum. AICPA/ECA lists several Level 4 elements for “leveraging technology.”

Computer integration across the curriculum was the focus of this multiple-year study which documents trends in computer integration in the business program completed by students preparing for accounting careers in an AACSB-accredited school of business. In an annual inventory completed for each course, Accounting and Business Core faculty identified the computer applications they used, as well as the degree to which they used each application. Additionally, they indicated the computer communication methods used.

While results differed for Accounting and Business Core courses, combined data revealed upward trends in all summary criteria: participation rate, average number of applications used per respondent, average degree of usage per respondent, and average communication methods used per respondent. Combined data also revealed increased usage of six of the nine specific applications. However, when data were examined across course levels, only five applications were found to be used at each undergraduate level.

Results of the study provide a basis for assessing curricular opportunities for students to develop Level 4 technology skills throughout the accounting program.

In 2003 the AICPA launched its Educational Competency Assessment (ECA) Website, identifying core competencies needed by students entering the accounting profession and providing an online resource for accounting educators as they assess and develop their accounting curriculum.¹

The website includes a Core Competency Database² which divides the desired competencies into three areas: Broad Business Perspective, Functional, and Personal. As shown in Table 1, “leverage technology” is a core competency in all three of these areas.

The Core Competency Database further breaks the competencies into “elements,” defined as

¹AICPA, Educational Competency Assessment, <http://www.aicpa-eca.org>

²*Ibid.*, <http://www.aicpa-eca.org/library/ccf/default.asp>

TABLE 1 AICPA CORE COMPETENCY DATABASE	
Competency Areas	Competencies
Broad Business Perspective	Industry/Sector Perspective
	International/Global Perspective
	Legal/Regulatory Perspective
	Leverage Technology
	Marketing/Client Focus
	Resource Management
	Strategic/Critical Thinking
Functional	Decision Modeling
	Leverage Technology
	Measurement
	Reporting
	Research
	Risk Analysis
Personal	Communication
	Interaction
	Leadership
	Leverage Technology
	Problem Solving/Decision Making
	Professional Demeanor
	Project Management

what the student should be able to do to show the competency has been attained. Each element is assigned a skill level to make the point that higher-level elements build upon lower-level elements and to “help accounting educators identify targets for different points in the curriculum.” The skill levels are described as follow:³

- Level 1 skills: Identifying
- Level 2 skills: Exploring
- Level 3 skills: Prioritizing
- Level 4 skills: Integrating

As shown in Table 2, each competency area includes Level 4 Integrating elements:⁴

³ Ibid., http://aicpa-eca.org/library/ccf/levels/levels_001.asp

⁴ Ibid., <http://www.aicpa-eca.org/library/ccf/competencies>

TABLE 2 “LEVERAGE TECHNOLOGY” ELEMENTS, SKILL LEVEL 4	
Competency Area	Level 4 “Leverage Technology” Elements
Broad Business Perspective	Uses technology to develop and present strategic information
Functional	Develops strategic uses of technology for enhancing work performance
Personal	Explores new technologies and their application to business and accounting scenarios
	Adopts new technology over time

Level 4 skills require development over time and over a broad spectrum of experiences. Therefore, a major concept in the AICPA Core Competency Framework is to “Build competencies across the curriculum.”

When establishing a plan for competency coverage, we should keep in mind that competency coverage should be “built” throughout the program. Higher competency levels are more likely to be achieved when a larger number of courses and student activities address the competency and at greater degrees of focus (“A Lot” versus “A Little” coverage). To give students the practice they need to develop important competencies, coverage should begin early in the program--in introductory courses--and progress across the curriculum. We are unlikely to achieve outcomes if we wait until late in the program to begin focusing on competencies. It is better to plan for a larger number of individual courses and student activities to each focus on a smaller number of competencies than to expect a small number of courses to achieve most of the competency coverage.⁵

⁵ Ibid., www.aicpa-eca.org/library/ccf/learning_outcomes/outcomes_005.asp

The use of computers across the curriculum has been the focus of a multiple-year “Computer Integration Survey” at a Midwestern AACSB accredited college of business. The study identifies trends in computer usage in both instruction and communication throughout all business curricula.

The purpose of this report is to present an analysis of the survey data as it applies to the Accounting program in this AACSB-accredited school. For this study the Accounting program includes Accounting courses as well as the Core courses taken by all accounting students (i.e., Business Core, International Business Core, and Support Courses).

Specifically, the report will answer the following questions:

1. What are the general trends in breadth and depth of computer usage in the Accounting program?
2. What are the trends in the usage of specific computer applications in instruction and communication?
3. To what extent is computer usage in instruction integrated across all course levels (100- to 500-level courses)?
4. What are the curricular implications of these findings as they relate to the Core Competencies and technology skill levels presented in the AICPA-ECA Core Competency Framework?

Methodology

At the end of Spring 2003, Spring 2004, Fall 2005, and Spring 2007, faculty teaching Accounting courses and the Core courses required of all accounting students completed an inventory of computer usage for each course they taught that semester. Internships and independent studies were not included.

The inventory form included a list of nine computer applications and a list of three communi-

cation methods. The applications list included Accounting, Database, Presentation, Simulation, Spreadsheet, Statistics, Word Processing, and Other. The communications list included Email, Internet Discussion, and Bulletin Board.

Faculty selected from these lists the applications and communication methods they used in each course. When selecting computer applications, they also indicated a degree of usage for each application, using a scale of 1 to 5, with 5 being the highest usage.

Data were subsequently compiled to indicate trends in (1) participation, (2) number of applications used, (3) depth of application usage, (4) usage of specific applications, and (5) and usage of computer applications for communication. Additionally, data was organized to show the extent to which current computer usage is integrated across the course levels, thereby accommodating sequential development of Level 4 skills.

General Trends in Computer Integration

Table 3 contains “Summary Criteria” for the first and last years of the computer integration survey. The criteria are summarized for Accounting courses, Core courses, and then the two course areas combined.

Participation Rate

In determining the participation rate for each program, the number of responding courses was divided by the number of courses scheduled that semester. For example, in the 2007 survey, the Accounting program scheduled 14 courses and received responses from 12, resulting in a participation rate of 86%.

As shown in Table 3, the participation rate in Accounting courses more than doubled from 40% to 80%, while the Core remained the same at 75%. When all courses are combined, the participation rate increased by 26%.

Course Area	Summary Criteria	2003	2007	% Change
Accounting	Participation Rate	40%	86%	115%
	Average Applications per Respondent	4.00	3.60	-10%
	Average Degree of Usage per Respondent	14.63	12.60	-14%
	Average Communication Methods per Respondent	2.00	2.13	6%
Core*	Participation Rate	75%	75%	0%
	Average Applications per Respondent	3.04	4.00	32%
	Average Degree of Usage per Respondent	10.70	14.38	34%
	Average Communication Methods per Respondent	1.57	2.00	27%
Combined	Participation Rate	61%	77%	26%
	Average Applications per Respondent	3.29	3.83	17%
	Average Degree of Usage per Respondent	11.71	13.64	16%
	Average Communication Methods per Respondent	1.81	2.06	14%

*Core is defined as the Business Core, International Business Core, and Support courses.

Average Applications per Respondent

Average applications per respondent is a measure of the multiplicity of applications used in each course. It is computed by dividing the total number of applications used by the total number of respondents. For example, in Spring 2007, 15 Accounting respondents reported a total use of 54 applications, an average of 3.6 applications per respondent.

While the average applications per respondent decreased slightly for Accounting courses, Core courses increased their average applications by 32%, or one application per course. As shown in Table 3, the Core increase resulted in a slight increase in the combined average number of applications used in each course.

Average Degree of Usage per Respondent

Average degree of usage is a measure of the depth of usage of computers in instruction. In completing the computer integration inventory, faculty selected the specific applications they used by checking a "Level of Usage" box labeled 1 (Low) to 5 (High). The reported usage levels were totaled and then divided by the number of respondents. For example, in Spring 2007, 15 Account-

ing respondents reported a 189 total degree of usage, an average of 12.60 per course.

The decrease in usage decreased in Accounting courses by 14% and increased in the Core by 34%, resulting in a combined gain of 16%.

Average Communication Methods per Respondent

Average communications methods per respondent is a measure of multiplicity of communication methods used in each course. In completing the inventory, faculty selected from a list of three computer communication methods (Email, Internet Discussion, and Bulletin Board) those they used in their course. In 2007 15 Accounting respondents reported 32 communications methods used, an average of 2.13 per course.

The use of computers for communication increased in both Accounting (6%) and Core (27%) courses, with the average being two methods per respondent.

Trends in the Usage of Specific Applications

As shown in Table 4, data indicate wide differences in the usage of specific applications, rang-

Application	Accounting Respondents			Core Respondents			Combined		
	2003	2007	Change	2003	2007	Change	2003	2007	Change
Accounting	38%	20%	-18%	4%	0%	-4%	13%	8%	-5%
Database	0%	7%	7%	13%	43%	30%	10%	28%	18%
Internet Research	100%	87%	-13%	78%	95%	17%	84%	92%	8%
Presentation	88%	67%	-21%	43%	81%	38%	55%	75%	20%
Simulation	0%	7%	7%	4%	14%	10%	3%	11%	8%
Spreadsheet	75%	67%	-8%	52%	52%	0%	58%	58%	0%
Statistics	0%	7%	7%	17%	14%	-3%	13%	11%	-2%
Word Processing	100%	93%	-7%	87%	90%	3%	90%	92%	2%
Other	0%	7%	7%	4%	10%	6%	3%	8%	5%

ing in Spring 2007 from zero usage of Accounting applications in Core courses to 95% usage of Internet Research in the Core. Applications in Accounting courses ranged from four applications being used by only 7% of the respondents and Word Processing being used by 93%.

Combined data indicate increased usage of 7 of the 9 applications, with increases ranging from 2% to 20%. Only two applications decreased in usage (Accounting, -5%; Statistics, -2%).

However, Accounting respondents reported decreased usage of 5 of the 9 applications: Account-

ing, -18% fewer respondents; Internet Research, -13%; Presentation, -21%; Spreadsheet, -8%; and Word Processing, -7%. Minimal increases were reported in Database, Simulation, Statistics, and Other.

Core respondents reported decreases in only two applications: Accounting, -4% and Statistics, -3%. Substantial increases were reported in Database (30%) and Presentation (38%).

Tables 5 and 6 clarify the most- and least-used applications in the last year of the study, with Table 5 documenting the applications used by more

Application	Accounting Respondents	Core Respondents	Combined
Internet Research	87%	95%	92%
Presentation	67%	81%	75%
Spreadsheet	67%	52%	58%
Word Processing	93%	90%	92%

Application	Accounting Respondents	Core Respondents	Combined
Accounting	20%	0%	8%
Simulation	7%	14%	11%
Statistics	7%	14%	11%

than 50% of the respondents and Table 6 documenting the applications used by fewer than 25% of the respondents.

Database, the only other application except Other, was used by only 7% of the Accounting respondents. However, combined with the Core's 43%, the combined usage was 28%.

Trends in the Usage of Specific Communication Methods

Two AICPA/ECA "Leverage Technology" elements relate to technology being used for communication: Level 1 Personal: Exchanges information using appropriate communication techniques such as email. Level 3 Personal: Uses technology appropriately to interact with others.⁶

As shown in Table 7, Email has been the predominant communication method, being used by 90 to 100% of the respondents. In Spring 2007, 47% of the Accounting respondents used Bulletin Boards, while 33% used Internet Discussion. Bulletin Board was used by 52% of the Core respondents, while only 19% used Internet Discussion.

When respondents are combined, only one communication method decreased in use in 2007, Bulletin Board by 2%. Email remained the same at 94%, while Internet Discussion increased by 12%.

Computer Integration Across Course Levels

Data for Spring 2007 were further compiled to indicate the usage of specific applications across course levels to facilitate the development of Level 4 skills. Tables 8, 9, and 10 present this data for Accounting, Core, and Combined courses, respectively.

As shown in Table 8, Accounting respondents reported substantial usage of four applications across all course levels: Internet Research, Presentation, Spreadsheet, and Word Processing. However, Database, Simulation, and Statistics were each included at only one course level, with Database being used by Accounting respondents only at the graduate level.

As shown in Table 9 on the following page, Core respondents used five of the nine applications across the four undergraduate course levels: Database, Internet Research, Presentation, Spreadsheet, and Word Processing. Simulation and Statistics were reported at two levels, while Accounting was not included at any level.

Table 10 combines the usage of Core and Accounting respondents. While the numbers changed, the results are similar to those reported for the Core: the same five applications were used across all undergraduate levels: Database, Internet Research, Presentation, Spreadsheet, and Word Processing. Accounting, Simulation, and Statistics were used at only two undergraduate levels.

Summary

The purpose of this five-year study was to document computer integration levels and trends in the Accounting program (Accounting and Core courses) to provide a basis for assessing the breadth, depth, and trends of this integration. Additionally, the study was to determine if integration crossed course levels in order to provide opportunities for students to develop the Level 4 Integrating skills proposed by AICPA in its Core Competency Database.

The study focused on two areas of computer integration: use of computer applications in instruction and use of the computer for communication. The data collection consisted of an inventory of computer integration completed by Accounting and Core faculty for each course they taught during the inventory period. In completing the inventory, faculty selected from a list of computer applications those they used in instruction, indicating the degree to which they used each appli-

⁶ *Ibid.*, <http://www.aicpa-eca.org/library/ccf/competencies>

TABLE 7
TRENDS IN COMPUTER COMMUNICATION IN ACCOUNTING AND CORE COURSES, 2003-2007

Communication Method	Accounting Courses			Core Courses			Combined		
	2003	2007	Change	2003	2007	Change	2003	2007	Change
Email	100%	100%	0%	91%	90%	-1%	94%	94%	0%
Internet Discussion	38%	33%	-5%	4%	19%	15%	13%	25%	12%
Bulletin Board	63%	47%	-16%	30%	52%	22%	52%	50%	-2%

TABLE 8
USE OF SPECIFIC APPLICATIONS BY ACCOUNTING RESPONDENTS, BY COURSE LEVEL, 2007

Application	200-Level	300-Level	400-Level	500-Level
Accounting		25%	33%	33%
Database				33%
Internet Research	100%	75%	67%	100%
Presentation	40%	50%	100%	100%
Simulation		25%		
Spreadsheet	60%	100%	67%	33%
Statistics		25%		
Word Processing	100%	100%	67%	100%
Other				33%

TABLE 9
USE OF SPECIFIC APPLICATIONS BY CORE RESPONDENTS, BY COURSE LEVEL, 2007

Application	100-Level	200-Level	300-Level	400-Level	500-Level
Accounting					
Database	100%	80%	22%	50%	
Internet Research	100%	80%	100%	100%	100%
Presentation	100%	80%	67%	100%	100%
Simulation			11%	100%	
Spreadsheet	100%	60%	44%	100%	
Statistics		20%	22%		
Word Processing	100%	80%	89%	100%	100%
Other		20%	11%		

TABLE 10
USE OF SPECIFIC APPLICATIONS BY COMBINED CORE AND ACCOUNTING RESPONDENTS, BY COURSE LEVEL, 2007

Application	100-Level	200-Level	300-Level	400-Level	500-Level
Accounting			8%	20%	20%
Database	100%	40%	15%	20%	20%
Internet Research	100%	90%	92%	80%	80%
Presentation	100%	60%	62%	100%	100%
Simulation			15%	40%	40%
Spreadsheet	100%	60%	62%	80%	80%
Statistics		10%	23%		
Word Processing	100%	90%	92%	80%	80%
Other		10%	8%		

cation. In addition, they selected communication methods they used, also from a list.

By the end of the five-year study, program data (Accounting and Core combined) showed increases in all areas of data collection: the program participation rate increased by 26%; the average number of computer applications per respondent, by 17%; the average degree of usage per respondent, by 16%; and the average communication methods per respondent, by 14%.

In terms of the usage of specific applications, data indicate increased usage ranging from 2% to 20% of all applications except Accounting (-5%), Spreadsheet (0%), and Statistics (-2%).

At the end of the study, five applications were being used by more than 50% of the respondents: Internet Research (92%), Word Processing (92%), Presentation (75%), and Spreadsheet (58%). Three of the nine applications were used by fewer than 20% of all respondents: Accounting (8%), Simulation (11%), and Statistics (11%).

In the use of communication methods, data also revealed a 12% increase in the use of Internet Discussion (25% total usage in 2007), while the use of Bulletin Board decreased by 2% (50% total usage in 2007), and Email usage remained constant at 94%.

When Spring 2007 data were examined across course levels, five applications were found to be used at each undergraduate level: Database, Internet Research, Presentation, Spreadsheet, and Word Processing. However, Accounting, Simulation, and Statistics were found at only two undergraduate levels, with minimal usage. Each course group reported no usage of one application at any undergraduate level: Core respondents reported no usage of Accounting, and Accounting respondents reported no usage of Database.

Recommendations

The trends and current level of computer usage documented in this study provide a basis for assessing computer integration in the accounting program and subsequently developing curricu-

lar goals for both Accounting and Core courses. The following actions are recommended:

1. Customize or develop additional technology elements to reflect program expectations. The AICPA Core Competency Framework suggests that program faculty may want to customize the ECA competency elements or even develop their own elements (what the student should be able to do to show he/she has developed the desired level of competency). Accounting faculty should review the AICPA/ECA technology elements to determine if customized elements are needed to reflect their technology expectations. For example, Accounting faculty should consider developing elements (with their corresponding skill levels) which identify the computer applications they consider basic to success in an Accounting career.
2. Use technology elements to review trends. Considering the ECA Level 4 Technology elements and others developed by the Accounting faculty, Accounting faculty should review the appropriateness of the trends revealed in this study.
3. Develop course elements. AICPA/ECA suggests writing course elements (as contrasted with program elements) and assigning a skill level to each element as a way to focus on specific skill development within a course.⁷ Following this suggestion would be especially helpful in any areas of concern that might develop from the review of the data presented in this study.

Although ECA does not directly link skill levels with course levels, Accounting and Core faculty should consider appropriate skill levels in their courses in order to provide opportunities to develop Level 4 Integrating Skills. Wherever possible, the course elements should increase the skills

⁷Ibid., http://www.aicpa-eca.org/library/ccf/elements/elements_001.asp

and knowledge of the application, rather than simply provide an illustration of the application's usage in the specific course content.

4. Develop individual goals. Faculty should consider their individual performance in comparison with the applications per respondent and degree of usage per respondent reported by respondents in this study.

EX ANTE PREREQUISITE KNOWLEDGE AND STUDENT SUCCESS IN PRINCIPLES OF FINANCE

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ABSTRACT

The purpose of this paper is to determine if students' retention of prerequisite course material affects their performance in the principles of finance course. This retention of knowledge is assessed by a test on the first day of class covering math, economics, and accounting. Controlling for prerequisite-related factors such as prerequisite grades, age, and number of prerequisites taken, a better score on the economics section of the prerequisite test is found to positively affect the final raw grade in the finance course.

Introduction

The area of assessing student knowledge and the retention of said knowledge has taken on greater importance in recent years. Assurance of Learning (AOL) has become the latest buzzword in business schools throughout the country. AOL may have several definitions depending on the accreditation agency. However, in its most basic form, AOL refers to 1) setting learning goals for a course or program of courses, 2) introducing topics congruent to the learning goals, and 3) utilizing an assessment technique to determine if students do indeed show the requisite knowledge of the aforementioned goals. Major accrediting agencies such as The Association to Advance Collegiate Schools of Business (AACSB) and The Southern Association of Colleges and Schools (SACS) have mandated that assessment of students be performed and integrated with accredited business programs' AOL goals. Therefore, creating an effective assessment program that verifies and promotes a program's AOL is not only good practice but a must for initial accreditation or reaffirmation.

Conforming to the process of AOL most business schools require prerequisite knowledge in the areas of math, economics, and accounting for the introductory finance course. However, little research has been done that points to which, if any, of these prerequisites is most essential. Years of teaching the principles of finance class has revealed that many students lack the basic skills learned in the prerequisite classes, or at the least students think they have not retained these skills. Students deficient in the prerequisites (and in those rare exceptions allowing students to take the principles class without meeting the prerequisites) may have a difficult time building a sufficient base of math, accounting, and economics knowledge in preparation for finance. As the principles of finance course relies heavily on problem solving ability, students who fail the basic prerequisite skills tend to struggle throughout the semester.

Realizing the importance of the correct prerequisite background and the students' failing to meet those prerequisites, a formal prerequisites test was implemented in six sections of a principles

of finance course. The test covers the elementary principles of accounting, economics, and mathematics needed to begin a study of corporate finance. Such testing offers a variety of benefits. Specifically, the test (1) forces the student to realize the necessity of the prerequisite knowledge and refreshes the student's memory to be better prepared for the learning of finance, (2) lets the student know of any deficiencies in order to correct them, (3) provides the student a warm-up for more difficult material and motivates the student to begin working early in the semester, (4) provides the student a first glance at the teacher's testing style and standards, (5) prepares the instructor on how the material should be presented throughout the semester, (6) can be used as an AACSB or SACS assessment tool to assess the performance of the programs providing the prerequisite knowledge.

Thus, a prerequisites test goes beyond testing what has just been taught in the current semester. It measures the student's ability to retain critical knowledge over one or more semesters. In the case of the nontraditional student this could cover several years. This study seeks to determine if a student's performance in prerequisite classes, as well as their retained knowledge and subsequent performance scores on the aforementioned prerequisites test, contributes to their success in the principles of finance course. Also examined are which, if any, areas of prerequisite study benefit the student the most in the basic finance course.

Literature Review

An exhaustive search of previous research documenting the relationship between finance prerequisites and future student success in the principles of finance course turns up few finds to date. However, the authors of this study feel that this will change dramatically in the coming years. As previously mentioned, studies that focus on student success in business-related classes are taking on increased importance. This is due in large part to business schools' and their accreditation agencies' increased focus on AOL and student engagement. Additionally, with traditional information delivery methods being supplemented and sometimes replaced by distance learning, on-

line classes, and other technology based methods the ability to determine the quality of classes offered and students' retention of that knowledge is brought to a new level.

Papers that study the quantitative relationship between student success in a principles of finance course and student success in the prerequisites needed for this class are very few. Didia and Hasnat (1998) find that a student's cumulative GPA has a statistically significant positive impact on success in the finance course. They also noted that a student's prior performance in accounting, economics, and math tended to carry over to success in finance. Blaylock and Lacewell (2007) find that the quantity of math classes taken, the time since a student's last accounting class and math class, and the average GPA in a student's statistics classes are also determinates of the student's finance course average. Grover, Heck, and Heck (2007) is very similar to the present study. On the second day of class in the introductory finance course they administer a prerequisite test covering math, accounting, and economics. They find that test scores in the areas of math and accounting may predict performance in the finance class while scores from economics does not. Additional studies performed in the area of finance have mostly focused on self-reported qualitative factors such as student effort and test anxiety.

A study covering a related business discipline by Juang, O'Shaughnessy, and Wagner (2005) finds that accounting students who pass a pretest/remedial course screen received significantly better grades in intermediate accounting than students who did not take the pretest of the one unit remedial class. Other studies that examine factors related to performance in accounting classes include Gracia and Jenkins (2003), Drennan and Rohde (2002), Murphy and Stanga (1994), Graves, Nelson, and Deines (1993). Student success in the area of economics includes papers by Schuhmann, McGoldrick, and Burrus (2005), Laband and Piette (1995), Anderson, Benjamin, and Fuss (1994), Bosshardt and Watts (1990), and Borg, Mason, and Shapiro (1989). Additional studies related to student preparedness and student performance include one for business communications (Marcal and Roberts, 2000),

one for business statistics (Rochelle and Dorte-weich, 2007), and a study concerning performance on the Educational Testing Service Major Field Exam in Business (Bagamery, Lasik, and Nixon, 2005).

Data and Methodology

This study includes students enrolled in six sections of the introductory finance course over a period of two semesters. A test covering the three subject areas of math, economics, and accounting was given the first day of class. By administering the test on the first day of class without any preparation, student performance would be a measure of retained knowledge from previous prerequisite classes. Calculators were not allowed during the test so as to assess the students' pure mathematical ability without the effects of their reliance on built-in calculator functions. Scores were extracted from the test for each of the three subject areas and the final semester averages were obtained from the instructor. The remaining prerequisite data was pulled from student transcripts. One hundred thirteen out of 203 observations are usable.

This study analyzes student performance as a function of the scores for each subject area on the prerequisite test as well variables that control for students' previous academic background and gender. Specifically, the cumulative GPA is included for each student as in Didia and Hasnat (1998) and Blaylock and Laceywell (2007) as a measure of overall academic performance. Since the number and timing of the prerequisite courses taken may have an influence on student performance in the finance course the number of courses taken within each prerequisite subject is included as in Blaylock and Laceywell, together with the time, counted in semesters, since the last prerequisite course was taken similar to the timing variable in Austin and Gustafson (2006). Similar to Didia and Hasnat, each student's past performance in each prerequisite subject area is measured by the average GPA for each of the required courses in each respective prerequisite discipline. Student performance is measured by the average raw semester grade. This is the final

semester grade before such grade adjustments as bonus points and extra credit.

The model used in this study is:

$$\begin{aligned} \text{GRADE} = & C + \text{GENDER} + \text{AGE_MATH} \\ & + \text{GPA_MATH} + \text{Q_MATH} \\ & + \text{AGE_ECON} + \text{GPA_ECON} \\ & + \text{Q_ECON} + \text{AGE_ACC} \\ & + \text{GPA_ACC} + \text{Q_ACC} + \text{GPA} \\ & + \text{PPM} + \text{PPE} + \text{PPA} \end{aligned}$$

where:

- ▶ C is a constant;
- ▶ GENDER is a dummy variable that equals 1 if the student is male and 0 if the student is female;
- ▶ AGE_MATH, AGE_ECON, and AGE_ACC, equal the number of semesters since, respectively, a math, economics, or accounting course was taken;
- ▶ GPA_MATH, GPA_ECON, and GPA_ACC equal the average GPA for the student's math, economics, and accounting courses, respectively;
- ▶ Q_MATH, Q_ECON, and Q_ACC equal the number of, respectively, math, economics, and accounting courses were taken;
- ▶ GPA equals the cumulative GPA; and
- ▶ PPM, PPE, and PPA are the percentage scores on the prerequisite test for math, economics, and accounting subject areas, respectively.
- ▶ Note that GPA_MATH and Q_MATH include only those math courses at or above the college algebra level.

Descriptive statistics for each of the variables are presented in Table 1. Since GRADE is the average student score ranging from 0 to 100, OLS is used to take full advantage of all the information in the dependent variable.

Results

Using all of the prerequisite GPAs together with the cumulative GPA may result in a dependency problem causing multicollinearity. Using a rule

TABLE 1 DESCRIPTIVE STATISTICS		
Variable	Mean	Standard Deviation
Semester average for the course (GRADE)	64.84	19.12
Number of males (GENDER)	54	--
Average GPA for all math courses taken (at the college algebra level and above) (GPA_MATH)	2.79	0.89
Number of semesters since a math course was taken (AGE_MATH)	6.98	10.06
Number of math courses taken (at the college algebra level and above) (Q_MATH)	2.09	0.81
Average GPA for all economics courses taken (GPA_ECON)	2.81	0.81
Number of semesters since an economics course was taken (AGE_ECON)	3.76	6.78
Number of economics courses taken (Q_ECON)	2.29	0.62
Average GPA for all accounting courses taken (GPA_ACC)	2.88	0.76
Number of semesters since an accounting course was taken (AGE_ACC)	3.07	4.65
Number of accounting courses taken (Q_ACC)	1.99	0.74
Cumulative GPA (GPA)	2.93	0.59
Average score on math area of prerequisite test (PPM)	59.04	21.13
Average score on economics area of prerequisite test (PPE)	64.31	22.03
Average score on accounting area of prerequisite test (PPA)	69.03	20.55

of thumb that multicollinearity may be a problem given a correlation coefficient greater than 0.8 or 0.9 (Griffiths, Hill, and Judge 1993, page 435), the correlation matrix presented in Table 2 does not show any high correlations that would warrant concern. The OLS coefficients from the model are presented in Table 3. Heteroskedasticity was detected using White's test for heteroskedasticity so White's corrected standard errors were used in measuring significance levels (White, 1980). Five variables are significant, one of which, PPE, is unique to this study. GPA_ACC indicates that student performance increases by about 4.65 percentage points for every one point increase in accounting GPA. Q_MATH also indicates that student performance is enhanced by about 4 percentage points for each additional math course taken. GPA also contributes largely to the student's semester average. Surprisingly, the number of accounting courses taken negatively impacts the student's final performance in finance. Two interactive possibilities may explain this. One possible explanation may rest with the

viewpoint taken by the students. Students with a more advanced accounting background prior to the principles of finance course may approach finance through "accounting eyes" and may try to inappropriately apply advanced accounting techniques. Another explanation may rest with the instructor's teaching methodology that may emphasize finance as an economic construct and not so much as accounting techniques. This, indeed, may be the case given the findings concerning the student's prerequisite knowledge in economics discussed next.

Although the contribution is not as great, the results show that a student's economics knowledge as measured by the prerequisite test positively and significantly affects performance in the principles of finance course. This shows that a student's retention of economics knowledge by the beginning of the finance course, and not just a previous background in economics, is important in performing well in finance.

TABLE 2
CORRELATION COEFFICIENTS BETWEEN THE VARIABLES

	GENDER	GPA_MATH	AGE_MATH	Q_MATH	GPA_ECON	AGE_ECON	Q_ECON
GENDER	1.0000						
GPA_MATH	-0.0509	1.0000					
AGE_MATH	0.0097	0.0074	1.0000				
Q_MATH	-0.0165	0.0460	-0.1458	1.0000			
GPA_ECON	0.0714	0.4483	0.0484	0.0060	1.0000		
AGE_ECON	-0.0612	0.0475	0.5462	-0.1077	0.0749	1.0000	
Q_ECON	-0.0251	-0.0614	0.0137	0.1831	-0.1237	-0.0598	1.0000
GPA_ACC	-0.1222	0.3760	0.2619	-0.0736	0.4594	0.1628	-0.0642
AGE_ACC	-0.0305	0.1051	0.2493	0.0425	0.1971	0.6172	0.0706
Q_ACC	-0.1449	-0.0175	0.0716	-0.0121	-0.0066	0.1092	0.1407
GPA	-0.0715	0.6426	0.0001	-0.1230	0.6666	0.0494	-0.0350
PPM	0.0792	0.3883	-0.0192	0.0459	0.4098	-0.0230	0.0124
PPE	0.1287	0.1907	0.0347	-0.0342	0.3138	0.0103	0.0015
PPA	0.0312	0.2758	-0.0562	0.0319	0.1956	0.0018	0.0454
	GPA_ACC	AGE_ACC	Q_ACC	GPA	PPM	PPE	PPA
GPA_ACC	1.0000						
AGE_ACC	0.1452	1.0000					
Q_ACC	0.1318	-0.0407	1.0000				
GPA	0.5937	0.1548	0.0324	1.0000			
PPM	0.2075	0.0675	0.0145	0.4940	1.0000		
PPE	0.3298	0.0679	0.1275	0.3831	0.3329	1.0000	
PPA	0.2140	-0.1278	0.1650	0.3162	0.2913	0.2418	1.0000

Interestingly, these findings are in direct contrast to the findings of Grover, Heck, and Heck (2007) who find that the economics background provide little to no predictive power on a student's finance grade while accounting and math does. Several factors may explain the contradictory results. Grover, Heck, and Heck is a conference paper and may have reported only initial findings at the time. The variables included in their model also differ from those in this study. Results may be affected by both the instructors for the introductory finance class and those for the prerequisite class in regard to how they teach, their grading procedures, and areas of concentration. Other factors may include the nature of the student population at each college where prerequisite testing was conducted and the exact questions of each prerequisite test.

Conclusion

Few previous studies have concentrated on the student's background and performance in prerequisite coursework as determinates in the performance in an introductory finance course. This study finds that not only does this prerequisite background positively influence performance in the finance course, but also that this performance is enhanced by the student's retention of that prerequisite coursework at the beginning of the semester, particularly in the area of economics. Of course, a student's success as determined by a background in prerequisite knowledge may depend on how much the instructor emphasizes such knowledge in the course. Such implications would be helpful for instructors in developing and managing their course. Contradictory results with other research solidify the need for ad-

TABLE 3 OLS RESULTS THE DEPENDENT VARIABLE IS THE FINAL GRADE RECEIVED IN THE COURSE.		
Independent Variables	Coefficients	White's Corrected Standard Deviation
C	-14.5475	9.8288
GENDER	2.6139	2.7715
GPA_MATH	2.3425	2.5876
AGE_MATH	0.1267	0.2016
Q_MATH	4.3949***	1.4157
GPA_ECON	-1.1383	1.9308
AGE_ECON	0.3212	0.2334
Q_ECON	-0.6472	2.36987
GPA_ACC	4.6462*	2.3840
AGE_ACC	-0.1045	0.2150
Q_ACC	-3.5808*	1.7344
GPA	14.0560***	4.0338
PPM	-0.0303	0.0875
PPE	0.2080***	0.0664
PPA	0.0913	0.0688
Adjusted R ²	0.5290	
F	9.9846	
n	113	
***Significance at the 0.01 level. **Significance at the 0.05 level. *Significance at the 0.10 level.		

ditional research in this area. Furthermore, the authors feel that the use of a prerequisites test as described in this paper will become an increasingly important AOL tool and could be used in conjunction with other AACSB assessment techniques.

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ASSESSING BUSINESS STUDENTS' LEADERSHIP SELF-EFFICACY

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ABSTRACT

This paper reports on two studies conducted to develop an assessment instrument to measure leadership self-efficacy (SE) in an undergraduate course in Management and Organizational Behavior. In both studies, students completed the measure at the beginning (Time 1) and end of the semester (Time 2). In Study 1, 146 students completed a SE scale consisting of 22 items covering 7 dimensions of SE. Analysis of responses indicated that the items were unidimensional in nature and internally consistent at both Time 1 and Time 2, suggesting that the items assessed a single construct. Additional analyses indicated that students demonstrated a significant increase in SE scores from Time 1 to Time 2. In Study 2, an abbreviated 14-item version of the original scale was administered to 142 students. Once again, analyses indicated that these items assessed a unidimensional construct and reached acceptable levels of internal consistency. As with Study 1, students exhibited a significant increase in SE scores from Time 1 to Time 2, although this effect was smaller in magnitude. Overall, the results indicate that leadership SE may be a viable construct and that our measure may work to assess this type of learning. Future directions for refining the construct and its measure are discussed.

At times, it seems like the term “accountability” is little more than an empty shell. Particularly in the world of business, and finance, it seems that many executives not only have avoided accountability, but profited from its absence. This may also be the case in the realm of education. However, in the field of education, there has been a push for accountability to external stakeholders. This concern about accountability has driven a growing attempt to assess learning outcomes. According to Walvoord (2004), Learning Assessment has become an industry and developed its own jargon. Certainly many colleges and universities have become concerned with assessing learning outcomes in response to accreditation standards.

In 2001, Rider University embarked on a comprehensive program to assess learning outcomes. The program was phased in over a four-year time frame and the Department of Management and Human Resources started in the Fall of 2005. Overall, the program included four stages:

1. Identification of Learning Outcomes,
2. Development of Measures of the desired learning outcomes,
3. Measurement of Outcomes, and
4. Application of Results to bring actual learning in line with desired learning.

In the same timeframe, AACSB turned their attention to an “Assurance of Learning” process

for Business School education. As one of the AACSB accredited schools, Rider's College of Business Administration (CBA) has directed our assessment efforts to be consistent with AACSB guidelines. In short, the assessment of learning outcomes has become a high priority item for our department.

**Target Course:
Undergraduate Introduction to
Management and
Organizational Behavior**

Although we are involved in Outcome Assessment at both the undergraduate and graduate levels, the main focus has been on "Fundamentals of Management and Organizational Behavior" (FMOB), our departmental undergraduate course included in the CBA core. This course is required for all business majors and can be taken following the completion of 42 credits. Although the course is recommended in the second semester of the sophomore year, many students take the class in the first semester of their junior year.

Over the years, the focus of the FMOB course has evolved from a "traditional" management theory class to an emphasis on organizational behavior. As we shifted to more behavioral topics, we also introduced more "experiential" learning opportunities. Accordingly, for assessment purposes, we recognize a distinction between "knowledge-based" outcomes and "skills-based" outcomes. Knowledge-based outcomes refer to the theoretical and empirical knowledge in our discipline (what you know). Skills-based outcomes refer to applying the knowledge (using what you know). Thus, in the past, we had identified two general learning goals:

Goal 1. Students will learn the major theories and research associated with the management of organizations. This is a knowledge-based objective that covers the recognition, recall, and understanding of the major content of the field of management in the organizational setting.

Goal 2. Students will develop their abilities to apply the knowledge of organizational behavior to real-world situations. This goal fits with the Rider University Vision Statement emphasizing "teaching and learning that bridges the theoretical and the practical".

In the Fall, 2005, we analyzed the course syllabi of all faculty teaching the FMOB course. Overall, the design of the course addressed the knowledge and skills objectives. Approximately 60% of a student's grade is related to the assessment of knowledge through exams while approximately 32% of the grade was based on individual and group projects concerned primarily with applications of the knowledge.

In general, we believed that our learning goals were appropriate for the course but that we could do a better job of identifying the specific content and skills to cover in the introductory course. For the department, this started the process of aligning learning outcomes with learning goals. However, during this process, a different kind of learning outcome was considered. If our students are indeed learning some personal and interpersonal skills, we would expect them to develop an increased sense of personal competence in using those skills. Thus, we added a third learning goal:

Goal 3. Students will develop a greater sense of "self-efficacy" (personal competence) in using their interpersonal skills in working with peers. This goal evolved from the departmental history of emphasizing the experiential learning of personal and interpersonal skills.

Learning Goals 1 and 2 will be assessed with rather straightforward extensions of our current assessment techniques -- multiple-choice questions and case analyses. However, Goal 3, the self-efficacy objective, represents a new direction for our outcome assessment. We had to define the domain of self-efficacy that we wanted to tar-

get in the course and determine how to measure that domain. This paper focuses on our attempts to assess self-efficacy as a learning outcome for our introductory Management class.

Self-Efficacy

Self-efficacy is a psychological construct that grew out of Albert Bandura's social learning theory. According to Bandura (1977), "[A]n efficacy expectation is the conviction that one can successfully execute the behavior required to produce the [desired] outcomes" (p. 79). An individual with high self-efficacy (SE) for a particular activity, (i.e., performing effectively as a leader), believes with a high degree of certainty that s/he can lead successfully in situations calling for leadership. Further, it is hypothesized that there is a positive relationship between level of self-efficacy and performance such that persons with high SE will perform better than persons with low SE. Thus, high self-efficacy is instrumental for individuals in that it increases their likelihood of actually performing the specific activity well. In addition, Bandura argues that efficacy expectations determine the amount of effort individuals will exert toward task accomplishment and the degree of persistence they will display when obstacles to successful performance are present.

These initial claims about SE by Bandura have been supported to a large extent by subsequent research conducted by Bandura and others (e.g., Bandura, 1997; Brown, Jones, & Leigh, 2005; Stajkovic, & Luthans, 1998; Wood & Bandura, 1989). When the SE construct was developed in the 1970s by Bandura, it was initially aimed at a clinical audience and was offered as a means for overcoming phobias and defensive behaviors (Bandura 1977). In the intervening years, however, Bandura and his associates have extended it to educational and decision-making applications (e.g., Bandura, 1997; Wood & Bandura, 1989) and it has been picked up by scholars in other fields as well. The importance of SE for understanding behavior in work settings is significant because it has been shown to affect goal selection, emotional reactions, and persistence. As Brown et al. (2005) conclude, "self-efficacy affects performance in large part by motivating individuals

to set and pursue high performance standards" (p. 974). It has served as an important variable in studies of such things as role ambiguity, role overload, organizational socialization, goal-setting, goal orientation and training (e.g., Donovan & Hafsteinsson, 2006; Fisher & Ford, 1998; Li & Bagger, 2008; Phillips & Gully, 1997). Recently it has been extended to leadership (e.g., Anderson, Krajewski, Goffin, & Jackson, 2008), negotiation skill maintenance (Stevens & Gist, 1997), and entrepreneurial self-efficacy (Chen, Greene, & Crick, 1998).

Self-Efficacy and the Assessment of Student Learning

Social learning theory posits that SE is developed through a reciprocal learning process in which individual, environmental, and cognitive factors interact to determine human behavior. The capacity of humans to use symbols (both verbal and imagined images) permits us to develop intentional actions and regulate our behavior. So, while self-efficacy can be developed through actual performance of the specific activity in question, it can also be developed through observation of others performing that activity, and through verbal persuasive encouragement from others. Importantly for the research described in this paper, social learning theory supports the view that "most human behavior is learned observationally through modeling: from observing others" (Bandura, 1977, p. 22). In Bandura's view, observing models informs the observer about both how to enact successful behavior and about what outcomes are likely to result from successful performance.

This is important for our purposes because we are exploring the possibility that participation in a basic management class can provide the basis for enhancing students' self-efficacy for management/leadership. Two of Bandura's processes are likely operating: (1) experiential learning through practice and (2) observational learning through "modeling" effects. The observational learning would come from the "modeling" effects of reading about successful managers, learning what effective managers do to be successful, viewing videos of successful executives, etc., that

fulfill this informational function. Admittedly, we are using the term “modeling” loosely here compared to Bandura’s usage. We do not provide detailed modeling of correct leadership behavior in our classes, so we are at best discussing a more abstract form of modeling based on learning principles, theories, rules for effective leadership and management.

Our first attempt to measure management or leadership self-efficacy occurred several years ago. One of the authors had introduced a career-development exercise and assignment into the foundational management course and wanted to see if this had the ability to increase students’ career maturity – a career self-efficacy construct developed by the field of career counseling. In addition, the department had recently re-named its major “Management and Leadership” and was taking steps to place more emphasis on leadership skill development in the foundation course. Different professors were trying different approaches, so it appeared useful to examine both career and leadership self-efficacy in several different courses taught by several different professors at that time. We wanted to see first, if career maturity was affected by the career development segment, and second, whether the different approaches taken to emphasizing leadership differed in their impact on leadership self-efficacy

Based on a review of the self-efficacy literature, in particular that literature related to scale construction, a 34-item instrument was constructed that included sub-scales for: upward influence, self-motivation, communication skills, assertiveness, motivating others, group skills, leadership skills, listening skills, comfort giving feedback, comfort receiving feedback, and career maturity. Each sub-scale consisted of 3-4 items designed to measure the specific skill in situations that students would be likely to encounter. For example, to measure “upward influence” we asked students to rate “How well can you get professors to help you when you get stuck on school-work?” on a Likert-type scale from 1= not at all well to 7=very well. The sub-scales consisted of the types of leadership skills we believed students would be likely to develop as a result of completing a course management and organizational be-

havior. When the department embarked on its assessment effort, this measure, although originally developed for other purposes, seemed to be well suited to our assessment needs since we had decided to focus in part on the development of leadership self-efficacy.

Study 1

Procedure

Undergraduate students enrolled in our FMOB course were asked to complete the 34-item self-efficacy measure at both the beginning of the semester (Time 1) and at the end of the semester (Time 2). All responses were anonymous, with students providing only a personally created identification code on the survey to allow us to match their Time 1 and Time 2 responses. 203 students completed the survey at Time 1, while 172 students completed the survey at Time 2. 146 students provided complete data for both Time 1 and Time 2.

Analysis of Survey Items

Of the original 11 subscales included in the self-efficacy instrument, 3 subscales (upward influence, self-motivation, and listening skills) were discarded from our analyses after recognizing that coverage of these topics was not uniform across all sections of the designated course. The career maturity subscale was also removed because, although the career development segment did significantly impact career maturity, that segment has not been universally adopted by all course instructors at this point. As a result, all analyses for Study 1 focused on the 22 items that remained after the 12 items associated with these 4 subscales were removed.

We first examined the internal consistency estimates associated with each of the 7 sub-scales. Coefficient alpha ranged from .67 to .86 at Time 1, and from .72 to .87 at Time 2, suggesting that the sub-scales exhibited low to moderate internal consistency. In contrast, coefficient alpha for the 22 item scale taken as a whole was .91 at Time 1 and .94 at Time 2. This suggested that al-

though the items were created to fit into distinct subscales, when considered together, the items appeared to be assessing a unidimensional construct (overall self-efficacy for team leadership).

As a next step, we ran an exploratory factor analysis using maximum likelihood estimation procedures to provide an assessment of the dimensionality of the 22 items. The results from this factor analysis and the accompanying scree plots suggested that the variance in these items could be primarily accounted for by a single, dominant factor. This factor accounted for over 35% of the item variance at Time 1 and 44% of the item variance at Time 2. In addition, the results suggested that all other possible factors that could be extracted were minor in nature and explained very little in terms of item variance. Taken together with the internal consistency analyses, these results suggest that the 22 items used to measure self-efficacy in this study were assessing a unidimensional construct.

As a final assessment of the measurement properties of the self-efficacy instrument, we examined item-total correlations and factor loadings for all items to determine if there were any problematic items that should be dropped. None of the 22 items showed consistently poor factor loadings or low item-total correlations, so all items were retained for our subsequent analyses.

Analysis of Change in Self-Efficacy From Time 1 to Time 2

One of the primary goals of creating this self-efficacy instrument was to allow us to assess changes in our students that occurred over the course of a semester as they were exposed to the materials contained in our course. To assess this change, we computed a total self-efficacy score for each individual at Time 1 and Time 2 based upon their responses to the 22 items. We then conducted a paired samples t-test to determine if there was a significant change in self-efficacy scores across these two time periods. The results of this analysis indicated that self-efficacy scores for students significantly increased from Time 1 ($M = 110.47$) to Time 2 ($M = 114.99$; $t [145] = 5.50$, $p < .001$). The effect size associated with

this difference ($d = .30$) suggests that this effect would be considered moderate in magnitude (Cohen, 1988).

Conclusions and Future Directions

Based upon the results obtained in this study, it appears that several conclusions can be reached regarding the use of our self-efficacy instrument for assessment purposes. First, the 22 items appear to tap into a unidimensional construct of self-efficacy, rather than the 7 distinct sub-scales that were originally intended. Second, this scale demonstrates satisfactory psychometric properties, suggesting that it is quite appropriate for use as an assessment device. Finally, the results obtained using this scale indicated that students in our classes exhibited a significant increase in self-efficacy that was moderate in magnitude.

While these findings are certainly positive in nature, it is worth noting that the results also suggest that there may be some avenues for improvement with respect to our self-efficacy measure. First, given that we are now assessing a unidimensional construct (as opposed to distinct sub-dimensions of self-efficacy), it would appear that it might be possible to shorten the scale from its current 22 items down to a smaller number of items, thus making the instrument less time consuming to administer to future classes. Second, the mean response provided by students across items was approximately 5 out of 7 on the Likert scale. Further analyses of the distributions of responses on these 22 items at Time 1 and Time 2 indicated that responses below the midpoint of the scale (4 out of 7) were relatively rare, suggesting that our students may be demonstrating a positive response bias or trying to present themselves in a socially desirable manner on our survey. Based upon these observations, a second study was conducted to address these potential areas for improvement.

Study 2

Given the findings of Study 1, the goal of Study 2 was to explore two possible avenues for refining our measurement of self-efficacy. First, we sought to determine if a shorter scale could ad-

equately capture the self-efficacy construct while still maintaining the psychometric properties exhibited by the full 22-item measure. Second, given the positive response bias that students may have been exhibiting in Study 1, we examined the effects of including both positively and negatively worded items (i.e., reverse-scored items) in our survey as a means of reducing this potential bias.

Procedure

To reduce the length of our self-efficacy measure, we chose the 2 items from each of the 7 sub-scales that demonstrated the highest factor loadings in Study 1. This allowed us to reduce the measure to 14 items, while maintaining coverage of the 7 areas of self-efficacy. To address the positive response bias that may have occurred in Study 1, 4 out of the final 14 items were reverse coded such that high responses on these items indicated lower levels of self-efficacy (e.g., “I have difficulty asking others for feedback about my performance”).

As with Study 1, undergraduate students enrolled in our FMOB course were asked to complete the 14-item self-efficacy measure at both the beginning of the semester (Time 1) and at the end of the semester (Time 2). All responses were anonymous, with students providing only a personally created identification code to allow us to match their Time 1 and Time 2 responses. 179 students completed the survey at Time 1, while 147 students completed the survey at Time 2. 142 students provided complete data for both Time 1 and Time 2.

Analysis of Survey Item

We first examined the internal consistency estimates obtained for the 14-item scale. Coefficient alpha was .77 at Time 1 and .83 at Time 2, indicating that this scale exhibited moderate levels of internal consistency. An examination of the individual items indicated that the removal of any of the 14 items would not have increased our coefficient alpha estimates, suggesting that none of the items were problematic from an internal consistency perspective.

As a next step, we ran an exploratory factor analysis using maximum likelihood estimation procedures to examine the dimensionality of the 14 items. The results from this factor analysis and the accompanying scree plots suggested that, once again, the variance in these items could be primarily accounted for by a single, dominant factor. This factor accounted for 27% of the item variance at Time 1 and 33% of the item variance at Time 2. In addition, the results suggested that all other possible factors that could mathematically be extracted were very minor in nature. Although not quite as clear as the results from Study 1, these results do suggest that this 14 item self-efficacy measure was tapping into a unidimensional self-efficacy construct.

One of the goals of Study 2 was to assess the feasibility of using reverse coded items as a means of reducing positive response bias. An examination of the means reported at Time 1 ($M = 73.20$) and Time 2 ($M = 74.67$) indicates that the average response provided by students across items was still approximately a 5 out of 7 on the scale used for this measure. In addition, consistent with what was observed in Study 1, responses below the midpoint of the scale (4 out of 7) were rather rare. Looking at only the 4 items that were reverse coded, the mean response on these items was also approximately a 5 out of 7 on the scale used. Taken as a whole, these results suggest that the addition of reverse-scored items to our self-efficacy instrument was not effective at reducing the positive response bias demonstrated by students.

Analysis of Change in Self-Efficacy from Time 1 to Time 2

As in Study 1, we computed a total self-efficacy score for each individual at Time 1 and Time 2 and conducted a paired samples t-test to determine if there was a significant change in self-efficacy scores across this time period. The results of this analysis indicated that self-efficacy scores for students significantly increased from Time 1 ($M = 73.20$) to Time 2 ($M = 74.67$; $t [141] = 2.32$, $p < .05$). According to Cohen's (1988) guidelines, the effect size associated with this difference ($d = .16$) would be considered small in magnitude.

Overall Conclusions and Future Directions

When taken together with the findings from Study 1, these results suggest a number of conclusions that can be drawn regarding the use of our self-efficacy instruments as a means of assessing students in one of our primary courses. The results of both studies indicate that self-efficacy appears to be a viable construct for use in this type of assessment. The measures were psychometrically sound, easy to administer to students at multiple times during the semester, and were sensitive enough to capture a significant increase in students' perceptions of their self-efficacy across the semester, despite potential issues with positive response bias or socially desirable responding.

Beyond these general conclusions, the differences observed between Study 1 and Study 2 suggest that any increased ease of administration gained by reducing the scale in length in Study 2 was offset by the reduced clarity of factor structure and reduced internal consistency observed in the shorter measure. Given that the longer measure contains only 8 additional items, it seems that the tradeoff in psychometric strength properties is not worth this minor reduction in length. Further, the use of reverse scored items did little to ameliorate the possibility of positive response bias of students in Study 2, suggesting that reverse coding items is not necessary or worthwhile within this particular instrument.

Given that the assessment process being implemented in our university is ongoing, the next question to consider is how the measure developed in these studies can be improved for future use. Based upon the favorable results obtained in Study 1 using the 22-item measure of self-efficacy, it appears that reverting back to this form of the measure would be prudent. However, one concern that remains with the use of this measure is the apparent positive response bias that is present in student responses. Future versions of the measure might consider alternative methods of reducing positive response bias such as the use of scale items designed to detect socially desirable responding or perhaps the design of stronger instructions emphasizing the value of honesty in

responding to these items and the problems created with responding in an overly positive fashion (cf. Dwight & Donovan, 2003). One final consideration for future iterations of this measure relates to the dimensionality of our assessment of self-efficacy. The measure developed for these assessments is unidimensional in nature, although it was intended to tap into multiple possible dimensions of leadership effectiveness. The possibility of developing a future measure that taps more specifically into domains of self-efficacy related to student leadership offers another direction for continued work. Future work in this assessment process could evaluate the relative value of these more specific measures of self-efficacy as compared to the general assessment developed in these studies.

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THE VALUE OF OBTAINING STUDENT TIME ESTIMATES FOR OUT-OF-CLASS ASSIGNMENTS

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ABSTRACT

In an era of blended, accelerated, and compressed courses, out-of-class assignments have become more integral to course design and more important to accomplish course objectives. Out-of-class assignments facilitate learning outcomes. Our position is that instructors should be aware of the amount of time students spend on out-of-class assignments, especially those that are expected to involve significant amounts of time. Herein we tell two stories. First Ballard describes how he began using student time estimates and how it resulted in course changes. Second Blink describes how she used student time estimates to improve a course and what she learned. We suggest obtaining student time estimates for out-of-class assignments is useful in course design, appreciated by students, and conducive to a positive, supportive course environment.

Introduction

Time is a precious resource. We make judgments based on how much time an activity will take, how much time we can make available, do we have time. We are constantly balancing the time demands of “the stuff of life.” Some things get done. Others slide.

Most of our courses are a combination of seat time (physical time in a classroom) and out-of-class activities (e.g., reading, assignments). We often hear two hours outside of class for each hour in class, an assumption based on an interpretation of the credit hour derived from the Carnegie Unit (for a full discussion, see Wellman & Ehrlich, *New Directions in Higher Education*, 2003). In an era of blended, accelerated, and compressed course formats, distinctions based on traditional concepts of time involvement have become muddled. Some argue that seat time is no longer relevant; mastery of course learning objectives should be the criteria for awarding credit.

Brickner and Etter (2008) suggested out-of-class assignments allow educators to extend learning

beyond the classroom “which frees up critical class time” (p. 90). Furthermore, instructors can design these assignments to increase “real world” relevance and application. On the other hand, Backes (1997) advised educators to minimize out-of-class assignments with adults. These assignments cut into personal time often filled with work and family obligations. He suggested that any out-of-class assignments should be meaningful and students should receive feedback on the assignments. In their survey of over 600 economics instructors, Harter, Becker, and Watts (1999) found out-of-class assignments decrease as class size increases.

It is our position that educators should be aware of the amount of time students spend in course-related out-of-class activities, especially out-of-class assignments. We have found that obtaining self-report estimates of time spent on out-of-class assignments facilitates improvements in course design and improves student course satisfaction. We will share our experiences with two different courses.

Ballard's Experience: Designing an Accelerated Course

Business Research is a required course for majors in Business Administration, Accounting, and Computer Information Systems at our college. Two or three sections are offered each semester, each section capped at 20 students. It is offered as a 15 weeks semester course meeting 75 minutes twice a week and as an accelerated course meeting for 3.5 hours 5-7 times over 15 weeks. The difference is 37.5 hours of seat time versus 18.5-24.5 hours of seat time. The learning outcomes are the same.

Designing Business Research for the accelerated format was a challenge. I had designed the traditional course and now I had to adjust the design for the accelerated format. Using the standard of two hours out-of-class for each hour in class yields 15 + 30 for a single credit hour or 135 for a three credit course. Both the traditional and accelerated courses were three credit hours. Therefore seat time + out-of-class activities should approximate 135. Understanding students will vary considerably in time invested in the course, I set 120 hours as the upper limit for design purposes. I have described this design process in detail elsewhere (See Ballard, 2005).

Setting the total hours for a course to 120 forced me to consider time in course design. I knew how much time would be spent in class. I only had my own estimates of the time students spent on out-of-class assignments. In Business Research these assignments included three projects and three internet assignments. I talked with students and obtained their self-report estimates of time on each assignment. Recognizing there would be some self-report error, I felt it would at least allow me to approximate time demands on students.

What I found surprised me. The traditional course I had designed approximated 130 hours, 10 more than my design for the accelerated course. In other words, the time demands on my traditional students were excessive by my own standards of what was reasonable. Students' comments of "too much work" now seemed valid. Consequently I adjusted seat time for traditional students making some class meetings

optional. I used the optional meetings to provide additional instructions to students who needed extra instruction.

This experience underscored for me the value of knowing about how much time out-of-class assignments take. In the next offerings of Business Research, in both formats, I asked students to keep track of their time on each project and internet assignment. I collected information during the courses and anonymously at the end. I found my previous estimates had been fairly accurate. I could now tell students the average amount of time each out-of-class assignment should take and the range from preceding classes. Interestingly, comments about "too much time" dropped considerably and student feedback was appreciative of my giving them the information as to the amount of time needed for assignments.

I found student time estimates for out-of-class assignments to be very helpful in both design and management of my Business Research courses. Consequently I expanded this to all my courses and I now routinely obtain estimates for most out-of-course assignments. I have found that student estimates are usually close to what I expect and are consistent across sections of the same course. However, occasionally a new assignment or a change in my instructional method may result unexpectedly in an increase in student time. Feedback from the time estimates keeps me in the loop with my students and the time impact of assignments I require.

Blink's Experience: Managing Expectations

Health Care Informatics is a required course offered off-campus in an accelerated Bachelor of Science in Nursing program for registered nurses. The program is offered as cohort with each class having 25-35 students. The course is accelerated meeting 3.5 hours every other week for eight weeks. The course is team taught and offered at different hospitals.

Each course required a preassignment, assignments for each class meeting, and a post-assignment. Weekly assignments included online

quizzes on textbook readings for each meeting, required participation in an online discussion including an on-line response to the discussion question as well as a thought provoking reply to another student's reply, plus a comprehensive, concept application writing assignment. For three sessions, feedback from students, both in student evaluations and direct face-to-face, was consistent: "Too much work", "Don't understand adult learners." The level of student complaints was disconcerting.

I expressed my concern about my experiences with my colleague (and co-author), John Ballard, who shared his 2005 paper. The idea of obtaining self-report student time estimates was new to me. My initial thought was that the students would find that they were not spending any more time than what the instructors were expecting of them. I decided to start gathering data about student activities outside of class, including reading, assignments, quizzes, etc.

At the beginning of the fourth offering, I explained to the students that I wanted to get a better idea how long outside class activities were taking. This would help me improve the assignments and provide information for future offerings of the course. I also tried to convey a better sense of our time expectations for students for our course. My approach was to have students enter their time estimates anonymously on a spreadsheet each class so I would have ongoing information. The students were very receptive and were please to document their time so I could evaluate. The system worked fine.

To my surprise, some assignments clearly took more time than I had expected. One assignment that I estimated at 3 hours was averaging 7-8 hours. This led me to reevaluate my out-of-class assignments and the associated learning outcomes. I realized that some aspects of assignments were "nice to have" but not essential to accomplish the learning outcome. In fact, I found the process of student time estimates resulted in my focusing more clearly on all learning outcomes and modifying as needed.

One example was an out-of-class assignment to enhance skills using certain tools. Through textbook reading, classroom activities, and participation in the weekly on-line discussion question, students learned about clinical decision support systems (CDSS), learned some basic Microsoft Excel spreadsheet skills, and explored some CDSS available on-line using Excel. For their application of knowledge and skills weekly assignment, they then had to find three clinical decision support systems. After reading an article on DSS success factors, they had to identify 6-8 criteria to evaluate and help predict the successful implementation of a DSS tool. Lastly, after they had to use their criteria to evaluate the three DSSs they had previously identified, they prepared a spreadsheet tool to document their findings and wrote an executive summary describing their results. The time involved in this assignment was excessive. Two factors were affecting: (1) the amount of time spent upfront looking for three clinical support systems and (2) the students' knowledge of Excel. Now I give the students a list of 15-20 clinical decision support systems from which to choose, and I have moved this assignment later in the course after the students have more Excel experience.

The fourth offering was more successful. Students could see we were concerned about the time involved in out-of-class assignments. They also appreciated the opportunity to help future students. In subsequent offerings, the benefits of obtaining student time estimates became even more clear. Given an assignment that averages 3 hours, students were more likely to seek help if they were making little progress by that point. Consequently, students were less likely to waste time if they were on the wrong path or had missed critical information. Consequently, I was able to identify issues and help students earlier than previously. End of course evaluations and verbal comments were positive. Students appreciated being asked how long assignments took and appreciated the feedback (means and ranges) from the historical data.

Benefits of Obtaining Student Time Estimates

In our examination of curricular design literature (e.g., Diamond, 1989; Mentkowski & associates, 2000), we found no discussions about the time involvement of students (though some discussion was found on time demands on instructors, e.g., Walvoord & Pool, 1998). We have benefited, and our students have benefitted from our knowledge, be it imprecise, of how much time out-of-class assignments take.

First, considering the time involvement required for assignments is useful in course design or redesign. Some assignments may take too much time given the learning outcome. Some may need to be revised or replaced to make better use of the students' time. We found that by focusing on time considerations, we focused more on the desired learning outcome for an assignment and how that learning outcome fit with course objectives. This is not to say that time estimates are the only factor in such determinations. Some assignments and objectives do require significant time investment, but those assignments now are much easier to explain to students.

Second, students appreciate having information about how much time assignments take. Our courses have a wide variety of students. Some have jobs. Others may have families. Regardless there are always competing demands on one's time. Providing means and ranges of previous time estimates allows students to plan their time accordingly.

Third, obtaining and using student time estimates is conducive to a positive, supportive classroom environment. It demonstrates that we as instructors care not only about our students' learning but also our students as people with all the demands of modern life.

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UTILIZING CORPORATE-SPONSORED NATIONAL COMPETITION AS A LEARNING TOOL

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ABSTRACT

Competition is good for the soul--and the classroom. In fact, student engagement in the classroom increases when competition is integrated into the learning process (Melendez & Williams, 2007). The Collegiate Creative Competition sponsored by the Yellow Pages Association (YPA) is the focus of the following discussion. An analysis of alternative college-level teaching methods is provided, followed by a description of the YPA Creative Competition, ancillary YPA assignments, as well as YPA grading methods. Finally, statistical results from the Yellow Pages Association Collegiate Creative Competition 2008 Program Evaluation (J. Davis, personal communication, February 19, 2009) are provided wherein 247 students and 60 professors who participated in the 2007-2008 competition provide both qualitative and quantitative feedback. Responses provide strong support for the use of competition in the classroom.

Introduction

The utilization of national or perhaps international competitions in a marketing classroom allows the students to apply their knowledge in a realistic setting while being excited and motivated by the potential for reward. Dweck (1986) proposes that academic competitions not only reinforce the learning of material. Further, group participation, or working with one's intellectual peers, can lend satisfaction to the participants aside from the experience of winning or losing.

Based on a shrinking job market and increased job competitiveness, there is an increase in the number of non-traditional college students. As a result of serving a varied market, professors are encouraged to introduce multi-stimulus learning methods, specifically those which incorporate experiential learning (Cantor, 1995). Suc-

cess with these alternative learning methods has been reported from several topic areas including political science and international relations with the use of the Simulated World of Model NATO (Meleshevich & Tamashiro, 2008), college-level collaborative music (Graff, 2008), mathematics with the use of the Mathematical Idol competition, based on the TV game show American Idol® (Melendez & Williams, 2007), and managerial economics and The Apprentice® (King, 2008). In 2004, Babsen College created courses based on The Apprentice® and integrated them into their MBA curriculum. Dubbed "edutainment" by the Wall Street Journal (Alsop, 2004), this teaching method incorporates basic team-building skills and business principles in a reality show format that is easily understood by today's student.

Benefits of Ad Design Competition

From a market-based perspective, providing real-world ad design experience to traditional undergraduate students is invaluable, especially when a large percentage of students will graduate and either work in a family business or start their own business. Moreover, the practice of using in-house ad agencies is on the rise given the long-run financial incentive (Anonymus, 2009). For the majority of firms, staffing a copywriter, illustrator or advertising director may be costly upfront, but may be considered more of an investment if viewed in the long-term (Hauser, 2006). A long list of companies have in-house agencies: Fox Broadcasting (Weprin, 2007), and brands such as Gap, Calvin Klein and Revlon (O'Guinn, Allen and Semenik, 2006).

As a result, advertising classrooms, in particular, are ripe for competing in creative contests involving design, layout, illustration and copywriting: skills enhanced only by practice. As Bolt (1993) highlights, experiential learning as achieved through national competition speeds learning and increases retention among participants. Further, students are exposed to real-world problems and are tasked with producing real-world solutions—something hiring companies look for when hiring college graduates (Bolt, 1993). As a result, competitions and computer simulations have been heavily employed in the past few years in both undergraduate and graduate business curricula.

In fact, the number of student participants in the Yellow Pages Competition has increased by over 350% in the 3 years since the contest's inception (YPA Collegiate Creative Competition Program Evaluation, J. Davis, personal communication, February 19, 2009). Students who have completed the YPA ad design competition cite their experience as excellent, stating that the competition was “a lot of fun and a great learning process” and “an amazing opportunity to design something and get it out to the public” (YPA Collegiate Creative Competition Program Evaluation, 2008, J. Davis, personal communication, February 19, 2009).

National Yellow Pages Ad Design Challenge

Two sections of my Advertising and Integrated Brand Promotion class have competed in the 2008-2009 National Yellow Pages Collegiate Creative Competition. A total of 2,069 students representing 189 schools registered and competed in the 2007-2008 YPA Creative Competition. Participation in the competition has continued to increase since the program began in 2005 when 573 registered students from 67 US colleges or universities competed. Now in its fourth year, the competition has experienced tremendous growth in participation of over 260% since its inaugural 2005 competition.

The goal of the competition is to provide 3-member student groups with an opportunity to create actual Yellow Page ads for an advertiser. The winner receives a monetary reward of \$2,500. Yellow Pages provides each student with a thorough case describing the advertiser, their benefits, past ads used by the company, competitor ads, as well as limited market research on the target market. More specifically, the case study includes information regarding the challenge and the advertiser:

- ▶ Client introduction
- ▶ Debriefing on the yellow pages as a print medium
- ▶ Submission rules and procedures
- ▶ Examples of advertiser's industry ads
- ▶ Examples of advertiser's past ads

Students are then required to submit 2 print ads and one Internet Yellow Pages ad. The case describes specific information that should be included in the print ads (advertiser's logo, web address, all telephone contact numbers, addresses of each location as well as maps of each location (full-page only), accepted credit card logos), as well as the internet ad (advertiser's name and the toll-free telephone number).

Ancillary Challenge Assignments

Along with developing ads, my students complete additional micro-assignments to complement the competition requirements. Note that these assignments are turned in to me; however, I do not provide specific feedback to groups as this would be a conflict of interest as even I am unsure as to what the judging panel considers to be a winning ad. The goals of each assignment are outlined as follows:

Assignment 1 (Market Research):
Define the advertiser's target market.

Here, students are asked to read the description of the market as provided in their YPA Creative Competition case. As a next step, the students must utilize external information sources to formulate what they consider to be the demographic, psychographic and usage behavior. This assignment allows students to understand the difficulty in analyzing a market demographically/geographically/psychographically and then applying that information in the formulation of an overall market profile.

Assignment 2
(Specifying Advertising Objective & Method):
Select advertising objective and method.

Finally, the teams research which advertising methods are best suited for print ads as well as internet ads placed through a directory such as the Yellow Pages. The competition website dedicates a section to learning about print directory ads complete with a print directory industry overview, media insights, advertising options, as well as tips for the creative. The assignment requires each team to select one advertising objective it hopes to accomplish with its ads (e.g., persuade the customer, affective attachment) as well as one or more methods to accomplish that objective (e.g., reason-why ad, feel good ad). The YPA Creative Competition case provides them with past advertisements used both by the advertiser as well as its direct competitors. Here, the students begin to consider their client's needs and desires when it comes to spending their advertising dollar. Interpreting a client's goals is important, and necessary for advertising agencies to succeed.

Additionally, students begin to consider ad effectiveness, brand recall, brand recognition, integrated brand promotion.

Assignment 3 (Design):
Design the advertisements.

This assignment may be broken up into three phases: (1) full page ad submission, (2) half-page ad submission, and (3) internet ad submission. Students have three subsequent deadlines for each ad they produce, as well as an opportunity to submit thumbnails or rough layouts of each ad at a face-to-face meeting between myself and the group. In the meeting, I look at their work and ask them questions based on their decisions regarding coloring, layout, use of information, etc. I do not offer any advice or direct feedback to the students as that would skew their work. This initial meeting is simply an opportunity to present their work and think through their decision-making process with an independent party. Final submissions are then completed by each team.

Assignment 4: (Group Presentations):
Present completed ads to classmates and faculty.

The completed ads are presented by each group to their classmates. Groups are instructed to include motivation and reasons for decisions made regarding their ad designs.

More specifically, the group presents the following information:

- ▶ use/non-use of color
- ▶ color representation
- ▶ border vs. bleed page
- ▶ copywriting—headline, subhead and body copy
- ▶ layout or physical placement of items on the page
- ▶ balance in the ad
- ▶ proportion
- ▶ unification within the ad
- ▶ object(s) of emphasis
- ▶ order/direction
- ▶ overall design

Assessment

In-house Judging

The YPA Creative Competition is a yearly competition wherein the final deadline falls at the end of the spring semester. It is necessary to provide some feedback to students filing submissions in the fall. Further, students submitting ads in the spring are allowed to gain more immediate feedback regarding their work. In order to provide more timely feedback to the students regarding the overall appeal of their ads, an intermediate everyday-user judging panel was constructed.

Students' ads are displayed inside the college and are judged by business faculty. Each group's full-page ad is numbered (to protect anonymity) and displayed and faculty members in the college are asked to come by at some point during the day and vote for their favorite. The college-level winning team is recognized in class and awarded a certificate. Further, any important information given by the intermediate judges is relayed to the ad design teams.

YPA Design Challenge Official Judging

All submitted advertisements are judged by a panel of experts including representatives from the Yellow Pages Association, the advertiser as well as representatives from the advertiser's agency. The panel assembles annually upon the completion of the competition when all entries have been received and award 1st, 2nd, and 3rd places, as well as up to 6 honorable mention awards.

Project Grade

There are several alternatives for deriving a grade for students as they complete the YPA Competition. Since the assignment primarily includes subjective elements, it is difficult to assign grades based on those ads who the instructor feels are superior. As a result, students could be graded based solely on their participation and/or completion of the assignments. Alternatively, the instructor may feel that it is appropriate to test students over information included in the case or on the Yellow Pages in general. Testing might also

include questions regarding specific print ad construction information covered in class. Another option includes having the everyday-user panel of college faculty assign a ranking of the ads in order to derive a grade.

Student & Professor Opinions of Competition

The YPA Creative Competition receives feedback from both student and professor usage via an online survey given at the conclusion of the competition year. Dr. Joel Davis, the author of the competition's case study, administered the 2007-2008 YPA Collegiate Creative Competition Program Evaluation using a survey collection website. The results reported in this discussion were provided to the author by Dr. Davis with full permission to utilize all information provided in survey responses.

The 2008 YPA Collegiate Creative Competition Program Evaluation survey gauges whether professors feel that competition participation increased theirs as well as students' knowledge of the Yellow Pages. Almost all respondents agree that their "students had a better, more positive understanding of the Yellow Pages and that this improved understanding resulted in more positive attitudes" Likewise, 93% of professors cited an increase in their understanding of the Yellow Pages. Students provided the following answers to open-ended questions regarding their YPA Ad Design Challenge experience:

--"Regardless of the results I thank you for the opportunity."

--"The competition was a lot of fun and a great learning process."

--"Thank you for the opportunity to use our skills in a "real world" situation."

--"This was an amazing opportunity to design something and get it out to the public."

--“Overall it is great and I am happy to be a part of it.”

Likewise, professors overseeing the game offered the following feedback regarding the competition:

--“A wonderful learning opportunity.”

--“Thank you for this opportunity for my students. I think it’s a great “real world” experience.”

--“The Yellow Pages Competition provides an interesting method for learning about promotion in general and the Yellow Pages specifically.”

--“The YPA [Competition] is a great tool for marketing and helping us see what the Yellow Pages are really all about.”

As a result of their positive attitudes toward the YPA competition, an overwhelming 77% of professors who responded stated that their classes were “very likely” to participate in the 2009-2010 YPA competition.

Conclusion & Pedagogical Implications

By participating in a national competition, students have an opportunity to utilize theories and strategies learned in the classroom. In my own classroom, students who participate in a national ad design competition have shown an increased level of interest in material as well as energy to learn new software programs, improve their artistic abilities and teamwork skills while competing.

Further, they are allowed to integrate theoretical aspects of advertising into an actual advertisement. Students are exposed to real-world problems and are tasked with producing real-world solutions—something hiring companies look for when hiring college graduates (Bolt, 1993). Using the national design competition as an experiential learning tool will increase the speed at which students learn the related material as well as the length of time they retain said material

(Bolt, 1993). Therefore, the students leave with a better understanding of not only what advertising is, but how it works and why.

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MOTIVATING GEN Y AMIDST GLOBAL ECONOMIC UNCERTAINTY

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ABSTRACT

The recent global economic uncertainty and the gradually aging population around the world have created a tension point for every single business organization. It is evident that the global workforce is experiencing a phenomenon that had not been seen since the 1960s. The aging workforce has prompted corporate America to be proactive in finding ways to shield itself from workforce shortage and yet the economic downturn had generated pools of qualified older and more experienced applicants. The focus of this research is on the Gen Y worker who has entered the workforce in the midst of global economic turmoil. As majority of the Baby Boomers reach retirement age, and the Gen Y workers begin to enter the workforce, Corporate America is trying to desperately grasp for sensible plans to manage the newer members of the workforce. Unfortunately, the Gen Y workforce has been stigmatized as money-driven, entitled, high expectations from employers, know it all, and want it now group of people. This research paper seeks to identify what factors the Gen Y workforce deems as motivators and demotivators to their job satisfactions. This research can contribute to organizational success and can significantly help prepare organizations for the near future.

Introduction

The entrance of the new workforce known as Generation Y, Gen Y, Echo Boomers, or Millennials have been much anticipated. In the 21st century globalization, workforce motivation has become a competitive factor to all industry whether it is in the manufacturing or service sector. According to Raines, if you can figure out how to maximize the talents of the new Gen, you would stand to win in the hypercompetitive business environment of the 21st century (2002). Top management around the world has also been concerned and anxious about the new workforce because they have been perceived as distinctively different compared to previous Gens. Human resource managers around the world have been struggling to formulate a workable strategy to select, hire, train, and retain the Gen Y workforce. Loyalty appears to be a thing of the past and life-time employment is non-existent. How a company motivates its workforce is a major factor to its sustainability and survival. The advent of the global economic downturn added to the challenges faced by top management in developing a well balanced plan to motivate and keep the Gen Y workforce.

The focus of this research is on the Gen Y worker who has started in the workforce in the midst of global economic turmoil. As majority of the Baby Boomers reach retirement age, and the Gen Y workers begin to enter the workforce, Corporate America is trying to desperately grasp for sensible plans to manage the newer members of the workforce. Unfortunately, Gen Y workforce has been stigmatized as money-driven, entitled, high expectations from employers, know it all, and want it now group of people. This research paper seeks to identify what factors the Gen Y workforce deems as motivators and demotivators to their job satisfactions. This research can contribute to organizational success and can significantly help prepare organizations for the near future.

Literature Review

A new paradigm is taking form in the workforce as the demographics of graduates change. There is a growing concern as the world's population is aging and organizations will be faced with a reduced number of workers entering the workplace. Corporate America is currently burdened with the challenge of not having sufficient qualified candidates to fill top management positions

when the baby boomers retire (Schooley, 2005). Most companies today are uncertain how to manage the new landscape of Gen Ys entering the workplace because the new Gen is distinctively different than the previous Gens in their attitudes and desires. According to Jayson, Gen Ys wants a more collaborative work environment and work-life balance (2006, Companies slow). They have high expectations of their jobs and they are not shy to share their discontent with their peers on their social networks (Rains, 2002). To complicate matters, Gen Ys are perceived to be more prone to change jobs than advance with the company that they start with thus making retention a significant concern for corporate America (Jayson, 2006 Companies slow).

Globalization waits for no one and unless management can find a medium to motivate Gen Y, who can help Corporate America remain competitive, United States could be in for a rude awakening and lose ground in the competition in the global economy. There is no doubt that Gen Ys entering the workplace has been difficult for management to comprehend as it is a group made up of new demographics that has been molded in an era of change. In addition, there is a major shift in the demographics of the workforce with the baby boomers close to retirement, but now having to work under the supervisions of Gen Y managers in their early 20s, which tends to create an atmosphere of uneasiness (Armour, 2005).

There is no doubt that a loyal workforce could tremendously improve any organization's chance of success but with a new Gen of employees, it is going to be a challenge. According to Johnson, the return on investments that companies put into creating a loyal workforce can be significant in that a loyal workforce will save the company time and money in recruiting, training, and retaining a valuable knowledge base (2005). It is easy to say that Gen Y is not prone to be loyal to any organizations that they work for. This new Gen brings with them the attitude that they are in demand, much needed, and Corporate America cannot do without them (Raines, 2002). One of the difficulties that human resource managers are facing is that since half of the Gen Ys who are employed full time have only been in the work-

force for a year or less, thus there is not a lot of factual data available to clearly identify their work habits (Safer, 2007).

Employers are further frustrated by the propensity of the new entrants to change jobs if things don't pan out the way they want (Armour, 2005). The concern is significant as major corporations are investing huge sums of moneys with consultants to teach them how to manage the Gen Y workforce (Safer, 2007). Companies such as Microsoft have developed different types of benefit packages that seem to appeal to the new Gen of workers. These packages are nothing like what personnel managers in the early 1990s had ever thought about; as shown in Conlin's and Greene's article on Microsoft (2007).

Characteristics of Gen Y

According to the Pew Research Center, Gen Y comprises of those who are between the ages of 15 to 25 (2007). Jayson reported that based on U.S. Census data, 14 out of 100 Americans are Gen Y (2006). Gen Y grew up in an environment that was in transition. It was the time when the tragedy of September 11 formed some of their very fiber. The new Gen of the workforce was brought up when the nation rekindled their focus on family values, structured lives, globalization and multiculturalism, terrorism, heroism, and patriotism, and parental support (Raines, 2002). According to Jayson, there are some commonalities that can be said about the Gen Y. They are said to be late bloomers who would move back home after graduating from college and are known to delay adulthood compared to their age group 40 years ago who would have left home, start a family and established themselves financially (Jayson, 2006). The Pew Research Center reports that most of the Gen Ys maintain close contact with their parents because 75% of those surveyed continue to be financially dependent on their parents (2007). Ironically, 80% of the Gen Y surveyed identified fortune and fame as their top priorities in life (2007). On a more positive note, the Gen Ys have also been described as "sociable, optimistic, talented, well-educated, collaborative, open-minded, influential, and achievement-oriented" (Raines 2002).

The Gen Y workforce is not in a hurry to start a career right after they graduate because most of them do not plan on any lifetime employment positions (Jayson, 2006). Furthermore, they have different aspirations about their careers that differ from other groups. According to the Pew Research Center, Gen Y is technologically savvy and uses technology to efficiently organize every aspect of their lives (2007). They are very comfortable with technology such that any new electronic device in the marketplace soon becomes their extension to the world (Safer, 2007). This new Gen is also characterized as being connected 24/7 and interdependent with their circle of friends (Raines, 2002). They place high emphasis on self-esteem and will challenge status quo in the workplace (Jayson, 2006). This is confirmed by the Pew Research Center that classified Gen Ys as the “Look at Me” Gen where social networking sites offers viewers personal profiles of their lives (2007). Safer posits that the new Gens of the workforce are confident and they make no excuse for putting themselves as the priority (2007). Gen Ys also feel that they are special as they have been provided for since childhood (Raines, 2002). They grew up in believing in volunteerism and giving back to community as important and they strive to make the world a better place (Jayson, 2006). Raines reported that one of the traits possessed by Gen Y is their sense of community service and their perception that a major reason there are many problem in the nation stems from people being selfish (2002). The Pew Research Center findings concur that Gen Ys are more critical of government actions or inactions (2007).

A positive note about Gen Y is that they are more comfortable with globalization and its consequences than previous Gens. According to the Pew Research Center, Gen Y mostly believes that globalization, outsourcing, automation, and immigrants are beneficial to the United States (2007). Raines states that Gen Y was taught to be tolerant and as such they are open to accept people who are not exactly like them (2002). According to the findings of the Pew Research Center, the majority (69%) of Gen Ys believes in finding better ways to make work more efficient (2007). Furthermore, majority of the Gen Ys surveyed by

the Pew Research Center were satisfied with the flexibility of their work hours, job security, proximity of their work to home, and their relations with their coworkers (2007). On the other hand, the Pew Research Center data shows that they are dissatisfied with health insurance and retirement plans aspects of their jobs (2007). Based on the literature review, it appears that although Gen Y gives priority to monetary rewards, and recognition, there are many other major factors that are also important to them such as volunteerism and tolerance for differences. To understand how to motivate Gen Y, the following section discusses the applicability of classical motivational theories on Gen Y, specifically during a global economical uncertainty when monetary rewards might not be a viable option.

Classical Motivation Theories and Gen Y

Management has an arsenal of motivation theories to assist them in continuously keeping their employees productive. It is vital to understand what factors are deemed relevant and influential in motivating Gen Y. The following section analyses how classical motivation theories can be utilized to motivate the Gen Y workforce.

Theory X and Theory Y

Douglas McGregor’s motivation theory distinguishes between the Theory X and Theory Y. McGregor opposes the assumption in Theory X that employees are inherently lazy, have to be coerced to perform, and must be rigidly monitored to perform. Instead McGregor proposes that work can be effectively carried out if management provides employees with an understanding of the objective of the organization and how it relates to them. Furthermore, McGregor proposes that employees can be committed to the organization if employees are rewarded for their contributions and this fact is communicated to them. Finally, McGregor believes that employees can be creative and take charge if they are given the opportunity (1960).

It appears at the onset, organizations would have to utilize Theory X on Gen Y as they were perceived as pampered and spoiled rotten “kids”

who just make demands and have a long list of needs. Behrens states that Gen Y needs structure and schedules because they are accustomed to them (2009). In addition, Gen Y grew up in an environment that focuses on “me” culture and requires coaching on team-building skills (Behrens, 2009). On the other hand, it is apparent that Theory Y is applicable to Gen Y in many ways. McGregor’s Theory Y is applicable in the sense that if you give Gen Y an opportunity to excel with proper guidance and training, they will shine. To recruit the best candidates they possibly could, Deloitte has their new employees create a recruiting video to show what it is really like working at the company. Gen Y appreciates the straight talk and wants to work for companies that appeal to them based on realistic input (Gerdes, 2007).

Two Factor Motivation Hygiene Theory

Herzberg classifies factors that motivate workers into two groups: hygiene and motivators. Under the hygiene group are factors that must be present in order for the worker to even contemplate accepting the position within the organization. These are factors that do not motivate but rather if not present can serve as dissatisfiers. Some of the factors are salary, working conditions, job security, policies and administration. On the other hand, the motivators are advancement opportunities, responsibilities, achievement, and recognitions. Herzberg further elaborates that there is a point of neutrality where workers are neither satisfied nor dissatisfied if the hygiene factors are present (1959).

Herzberg theory is applicable to Gen Y with a new heightened level. It remains true that the hygiene factors need to be present. For instance, at Wells Fargo, the motivator is a match to employees’ charitable gifts of up to \$6500 per employee (Gerdes, 2007). This is an important feature because one of the priorities that Gen Y has is volunteerism and giving back to the community.

Hierarchy of Needs

Maslow’s Hierarchy of Needs is by far the most popular of all motivation theories. Maslow pro-

poses that there are five stages of needs and each of these needs can serve as motivators as long as it has not yet been achieved. Once it is achieved, the workers will pursue the next stage of need. The five stages of need are physiological, safety, social, esteem, and actualization. In the first stage, workers are motivated by the prospect of achieving their needs for basic needs to survive. In the second stage, workers strive to achieve safety and security. In the third stage, the workers have met their basic needs and feel secure with their work; they would start to venture for social acceptance and networking with people that they work with. In the fourth stage, workers start seeking recognition for their accomplishments and want respect from others. Finally, in the fifth stage, workers are now confident that they have reach a stage where they are well positioned in life and in their career and they can now spend time in realizing things that they want to do. It is at this stage that workers want to be all they can be and optimize their potential (2000).

Maslow’s Hierarchy of Needs remains applicable in this day and age. It does not matter which Gen you belong to, the first two stages of Maslow’s hierarchy are absolutely necessary. The last three stages of Maslow’s hierarchy are more prominently applicable to Gen Y, especially stage three because Gen Y is considered to be social beings unlike previous Gens. They have profiles in social network sites and they keep in touch with their friends and family 24/7. In fact, large companies are starting their own in-house social networks to accommodate their workers (Green, 2007). Furthermore, Behrens shares that although Gen Y is prone to change jobs, but if they feel that their organization is trying to work with their perceived beliefs and challenges, they can become very loyal (2009). In stage four of Maslow’s hierarchy, workers want self-esteem and this is implemented at Sprint where every employee is an “associate” rather than an employee and as such, they receive on average 78 hours of training and 34 hours of professional development each year (Gerdes, 2007). Finally, stage five of Maslow’s hierarchy can be seen at Netflix where employees are paid generously in an attempt to let their employees excel and realized their full potential (Conlin, 2007, September 24).

Hawthorne Experiments

Mayo was given the responsibility to investigate a new phenomenon happening at the Western Electric Hawthorne Works in Chicago back in the early 1930s. Essentially what Mayo found is that workers are not just the economic men as perceived during that time period. Mayo found that workers are also social men and the bond that they form with co-workers can greatly influence their performance under different working conditions. He further found that when workers were given attention and responsibility, their productivity increases. Mayo's work has often been considered the beginning of team building in management (Quah, 2007).

Mayo's Hawthorne Experiment can be seen in the new employee teaming method. Mayo found that the social bonding that employees form at work can influence how they perform. At Randstad, they have been teaming up employees who are distinctively from two different Gens (Berfield, 2007). On one end, it is to alleviate the problems of the aging baby boomers and the knowledge that they would one day take away with them when they are ready to retire. On the other hand, it is a great bonding and learning experience for both team members. Another example is the increase use of social networking sites to encourage employees to get to know each other better so that if they were to have the opportunity to collaborate in company projects in the future, they would already have established some relationships with each other.

McClelland's Theory of Needs

McClelland proposes that workers are motivated by some fundamental needs and offers management the three need theory: High need for achievement, high need for affiliation, and high need for power. McClelland claimed that workers with high need for achievement are motivated to stay away from situations that are either too high or low in risk because they yearn for recognition of achievement. While workers who have high need for affiliation are motivated by being accepted by other people so they tend to conform. Finally, the workers who have high need for power can either be accumulating power for

oneself or for the betterment of the organization (1961).

McClelland's theory of needs is very fitting because the characteristics of Gen Y are suitable for each of the need theories presented. It is easy to see how Gen Y has a high need for achievement. As discussed previously, Gen Y was brought up under the watchful eyes and protection of their parents that consistently encourage them to reach for the stars. They are the "can-do" Gen who are self confident and constantly in search of their next purpose in life. As for the high need for affiliation, the increasing number of Gen Y with personal profiles posted on numerous social network sites tells it all. The new Gen of workforce is one that is connected 24/7 and they have an intense need to be informed of what their cohorts are doing. Finally, the high need for power is a need that is obvious with Gen Y as we live in a new era where even Gen Y has an equal chance of becoming powerful. In 2006, BusinessWeek did a special report on the best entrepreneurs under 25 years old which included the founders of YouTube (Leiber, 2007). These Gen Ys are wealthy and powerful and what they have achieved is the symbol of what everyone in Gen Millennial dreams to be.

Gen Y and Global Economic Uncertainty

The landscape of the current workplace signals a change in recruiting the qualified Gen Y workforce. The global economic uncertainty resulted in a rising unemployment rate that appears to increase organizations' ability to attract ideal Gen Y applicants. Gen Y is competing with applicants who possess years of proven skills but were laid off and are willing to take a lesser compensation or lower title to return to the workforce. There is no doubt that Gen Y is different but it does not mean that they cannot be trained to contribute to organizations that they choose to be employed with. The key to having a successful relationship with any group has always been effective communication. Just as the Gens before them, Gen Y wants to be heard, they want to be part of something meaningful. Gen Y is not as intimidating or demanding as they may have been presented. According to Raines, Gen Y ac-

tually wanted role models, to be challenged, and to be respected (2002). They also have a “can-do” ready to take on the world attitude and want frequent feedback (Heathfield, n.d.). Gen Y wants to have some flexibility and work with their friends (Raines, 2002). Gen Y also wants to plan out their career and see where it will take them and how to get there (Heathfield, n.d.).

In a recent survey by Deloitte, Gen Y workers were asked to choose the top three reasons why they choose their current employer and the result was not surprising but it was encouraging. Of the top three choices, 63% of the respondents selected “Opportunities for growth and development,” 50% of the respondents selected “Salary and benefits package,” and 47% of the respondents selected “Company culture/reputation” as the top three reasons for them in selecting a particular company to work for (CU360, 2009). It is encouraging to know that albeit all the research and assumption that monetary reward is the number 1 priority for Gen Y’s decision, this survey showed that although it is important, majority of the Gen Y are actually more interested in the possibility for career advancement and growth. In another survey, Gen Y were asked to rate six types of rewards that they deem were as important as compensation and the respondent rated having “high quality colleagues,” “flexible work arrangements,” and “prospects for advancement” as the top three while “recognition from one’s company or boss,” “a steady rate of advancement and promotion,” and “access to new experiences and challenges” as the later three top rewards (Hewlett, Sherbin, and Sumberg, 2009).

Garretson recommends Gen Ys to reconsider what they should request from potential employers during this global economic uncertainty (2009). Sujansky concurs with Garretson as Gen Y is stigmatized by high expectations due to their upbringing (HR Focus, 2009). Gen Y is faced with extra work and longer hours as the workforce shrinks and workload are spread throughout the organization. Sujansky posits that the added workload and longer hours would not adversely impact Gen Y as they are known to be excellent in multitasking (HR Focus, 2009). Furthermore, Gen Y’s technological savvy will help

them maintain the level of productivity needed (HR Focus, 2009).

Organizations interested in retaining Gen Y should have the skills to be flexible, ability to challenge them continuously, promote organizational interest in technology, and possess a willingness to look at organizational issues differently (Behrens, 2009). Other recommendations to managing Gen Y include:

1. Provide structure
2. Provide leadership and guidance
3. Encourage them to live up to their potentials
4. Encourage them to collaborate with others
5. Be effective listeners to them
6. Provide them with appropriate challenges and changes
7. Provide them with opportunities to multitask
8. Capitalize on the their technological expertise
9. Capitalize on their networking abilities
10. Provide them with a well balanced life work environment
11. Provide them with an employee-centered workplace (Heathfield, n.d.)

It is interesting that even if all the talks about Gen Y seemingly acting like a bunch of spoiled kids, they are actually trainable but might be a bit of a twist from what human resource management are used to. Looking at the above-mentioned guidelines Gen Ys possess some key qualities not seen before; they join the workforce better educated, better trained in technology, and packed with self-confidence. Since Gen Y is assumed to be self-confident, management needs to consider this factor and build on it. Gen Y should be encouraged and given opportunities to grow and shine. They can further be placed in teams where their skills and knowledge can complement each other.

As the landscape of workforce changes, the values of the world that we live in also changes, so it is not surprising that Gen Y wants and demands a more balanced life-work environment. They have more than likely seen how their parents had de-

voted more time to work and neglected more important things in life. They have grown up in an environment of uncertainty. They want to make sure that they get to enjoy life before it is too late. To motivate Gen Y, management needs to ensure them that their workplace will put them first as in the 21st century talent is the key to organizational success.

Conclusion and Future Research

After reviewing current literature on Gen Y and analyzing the applicability of classical motivation theories, it appears that the Gen Ys can be motivated with age old proven motivational tools albeit the economic uncertainty. Indeed there is a change in the landscape of the workforce and there is no doubt that it is going to be a little bumpy at the beginning but based on the research, Gen Y, like other Generations before them are asking to be heard. They might be a bit more expressive and less patient, and they obviously possess more talent and skills than those before them. They were raised in a new era of technological advancement with all sorts of electronic gadgets at their finger tips. This new generation has a lot to offer organizations capable of tapping into to their world and identify exactly what makes their world go round.

Some of the factors identified from this research that can motivate Gen Y include empowerment; flexibility; respect; leadership; quality of work life; social networking; and giving back to the community. It is apparent that Gen Y wants to be respected for their contributions in the workplace. They want the flexibility of being empowered to carry out their tasks but they want their leaders to offer sufficient and appropriate guidance. Gen Y workers are high achievers who want a well balanced family and work life. They expect to have the opportunity to maintain a healthy social life and be well connected. They want recognition for their work but above all, Gen Y is determined to give back to the world, society, and environment.

Human resource managers must understand these fundamental aspects about Gen Y if they want to have a fair chance at attracting the scarce

talents available in the marketplace. For future research, incentive plans must be revisited to ensure that the choices are those that meet the needs of the new Gens. As far as loyalty is concern, is it possible that Gen Y can be the generation that yearns for more stability in their career? In this day and age when talent is in short supply, it would be to any organization's benefit to think hard and long. The trend of developing a strong foundation and sense of loyalty with Gen Y has already started with companies such as Google and Microsoft where Gen Y's needs and wants are being met and exceeded.

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**Academic Business World
International Conference
(ABWIC.org)**

The aim of Academic Business World is to promote inclusiveness in research by offering a forum for the discussion of research in early stages as well as research that may differ from 'traditional' paradigms. We wish our conferences to have a reputation for providing a peer-reviewed venue that is open to the full range of researchers in business as well as reference disciplines within the social sciences.

Business Disciplines

We encourage the submission of manuscripts, presentation outlines, and abstracts pertaining to any business or related discipline topic. We believe that all disciplines are interrelated and that looking at our disciplines and how they relate to each other is preferable to focusing only on our individual 'silos of knowledge'. The ideal presentation would cross discipline borders so as to be more relevant than a topic only of interest to a small subset of a single discipline. Of course, single domain topics are needed as well.

Conferences

Academic Business World (ABW) sponsors an annual international conference for the exchange of research ideas and practices within the traditional business disciplines. The aim of each Academic Business World conference is to provide a forum for the discussion of research within business and reference disciplines in the social sciences. A secondary but important objective of the conference is to encourage the cross pollination of disciplines by bringing together professors, from multiple countries and disciplines, for social and intellectual interaction.

Prior to this year, the Academic Business World International Conference included a significant track in Learning and Administration. Because of increased interest in that Track, we have promoted Learning and Administration to a Conference in its own right. For the full call for papers and more information go to <http://ABWIC.org> and <http://ICLAHE.org>

**International Conference on
Learning and Administration in
Higher Education (ICLAHE.org)**

All too often learning takes a back seat to discipline related research. The International Conference on Learning and Administration in Higher Education seeks to focus exclusively on all aspects of learning and administration in higher education. We wish to bring together, a wide variety of individuals from all countries and all disciplines, for the purpose of exchanging experiences, ideas, and research findings in the processes involved in learning and administration in the academic environment of higher education.

We encourage the submission of manuscripts, presentation outlines, and abstracts in either of the following areas:

Learning

We encourage the submission of manuscripts pertaining to pedagogical topics. We believe that much of the learning process is not discipline specific and that we can all benefit from looking at research and practices outside our own discipline. The ideal submission would take a general focus on learning rather than a discipline-specific perspective. For example, instead of focusing on "Motivating Students in Group Projects in Marketing Management", you might broaden the perspective to "Motivating Students in Group Projects in Upper Division Courses" or simply "Motivating Students in Group Projects" The objective here is to share your work with the larger audience.

Academic Administration

We encourage the submission of manuscripts pertaining to the administration of academic units in colleges and universities. We believe that many of the challenges facing academic departments are not discipline specific and that learning how different departments address these challenges will be beneficial. The ideal paper would provide information that many administrators would find useful, regardless of their own disciplines

Conferences

Prior to this year, Learning and Administration was a primary track of the annual Academic Business World International Conference. Because of increased interest, we have promoted Learning and Administration from a Track to Conference in its own right. For the full call for papers and more information go to <http://ICLAHE.org> and <http://ABWIC.org>

