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INTEGRATING TRIPLE BOTTOM LINE SUSTAINABILITY CONCEPTS INTO A SUPPLIER SELECTION EXERCISE

Michael Godfrey, University of Wisconsin Oshkosh
Andrew Manikas, University of Wisconsin Oshkosh

ABSTRACT

This paper discusses the integration of sustainability concepts into a quantitative supply chain management course in management science. Specifically, we discuss an exercise using the analytic hierarchy process (AHP) for making sustainability supplier selection decisions incorporating a triple bottom line approach (economic, environmental and social performance objectives). The multiple, conflicting objectives and the qualitative nature of the social performance objective require the use of multi-criteria decision-making. Our AHP exercise requires only Excel and could be expanded to include additional triple bottom line criteria.

JEL: M19, M21

KEYWORDS: Sustainability, Supply Chain Management, Management Science, Curriculum, Triple Bottom Line, Analytic Hierarchy Process

INTRODUCTION

Our Supply Chain & Operations Management department began integrating sustainability into our major in Fall 2006 with the introduction of a required course in Environmental Management, as discussed in an earlier article (Godfrey & Manikas, 2009). The first widespread definition of sustainable development was presented in *Our Common Future* (World Commission on Economic Development, 1987, p. 8) in which sustainable development was described as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Later, other authors, e.g., Elkington (1994, 1998), expanded the definition of sustainability to include the triple bottom line of economic, environmental, and social performance. Tan, Ahmed and Sundaram (2010) presented a triple bottom line systems dynamic model for managing daily operations at a warehousing company.

They recommended modeling the relationships between the triple bottom line measures: economic issues (e.g., capital investment, warehouse rent, transportation cost, handling cost, packaging, information systems, hire cost, etc.); environmental issues (e.g., carbon minimization, recycling, solid waste, air pollution, water pollution, etc.); and social issues (e.g., health, safety, recruitment, retention, working hours, wages, job satisfaction, training, etc.).Probably the least understood and under-researched of the three bottom lines is social performance. Mass and Bouma (as cited in Castro & Chousa, 2006) classified social performance under two categories: internal measures (education, training, safety, health care, employee retention and job satisfaction) and external measures (sponsoring, volunteer work, investment in society, and stakeholder involvement). Norman and MacDonald (2004) argued that it is impossible to calculate a sound social performance bottom line in the same way that an income statement is created. Summing a company's performance on various social performance measures into a single bottom line is problematic due to: (a) the question of what units to use to express social performance, and (b) the manner in which social performance often is expressed—using percentages, which cannot be added or subtracted into a single meaningful measure. However, even though managers cannot calculate a bottom line for social performance, we propose that managers still could make value judgments and comparisons

concerning which social justice objectives are more important. Multi-criteria decision-making (and AHP in particular) is ideally suited for making these value judgments and comparisons.

This paper discusses the continued integration of sustainability concepts in our supply chain management curriculum. We already have added several sustainability exercises in our Manufacturing Planning & Control, Supply Chain Management, Supply Chain Strategy and Advanced Quality Management courses. In the current paper, we outline the use of AHP for supplier selection decisions based on the triple bottom line.The remainder of this paper is divided as follows. First, we present literature discussing how universities have integrated sustainability in their curricula, how business schools have integrated sustainability in their curricula, and how supply chain management departments have integrated sustainability into their curricula. Second, we provide an overview of using AHP for supplier and other multi-criteria decisions in supply chain management. Third, we present the in-class exercise using AHP. Fourth, we conclude with a summary of the AHP exercise.

LITERATURE REVIEW

Sustainability and University Curricula

Educating students on sustainability topics came to the forefront when UNESCO declared 2005-2014 the United Nations Decade of Education for Sustainable Development (Education for Sustainable Development). The Association of University Leaders for a Sustainable Future (About ULSF) promotes sustainability education as a critical focus of teaching, research and operations at universities worldwide (its members include more than 350 university presidents and chancellors from more than 40 countries who have signed the 1990 Talloires Declaration). Moore (2005) made seven recommendations for sustainability at the university level: (1) Infuse sustainability into all university decisions, e.g., update the sustainability development policy, use sustainability as the overall goal of the university, and use the campus as a living/learning laboratory; (2) Promote and practice collaboration, e.g., create incentives for collaboration, implement broader based admissions standards, and promote group work; (3) Promote and practice transdisciplinarity, e.g., increase program flexibility for undergraduate students, redesign programs, and promote reflection of worldviews; (4) Focus on personal and social sustainability, e.g., increase job security for lecturers, reduce workloads, and promote personal wellness; (5) Integrate planning, decision making and evaluation, e.g., by creating appropriate criteria for evaluation and rewarding of faculty; (6) Integrate research, service, and teaching, e.g., promote the scholarship of teaching and community service learning; (7) Create space for pedagogical transformation, e.g., create space and time for reflection, dialogue, and action. Regarding curriculum change at the university level, Kagawa (2007) cautioned that students strongly associate sustainability with environmental aspects; therefore, curriculum changes must demonstrate the connections between the other two aspects of sustainability—economic and social performance. Integration of sustainability in non-business curricula appears to be strong particularly in the engineering disciplines (El-Zein, Airey, Bowden & Clarkeburn, 2008; Lourdel, Gondran, Laforest, & Brodhag, 2005; Mulder, 2004). This is not surprising given engineering's influence in product design, process design and project management.

Sustainability and Business School Curricula

As sustainability topics have become more prevalent in universities as a whole, those topics have filtered into business school curricula. For example, the Aspen Institute Center for Business Education (Beyond Grey Pinstripes, 2007-2008), in a recent study of 112 full-time MBA programs accredited by AACSB, found that 35 of those MBA programs offer a special concentration or major that allows students to focus on social or environmental issues; however, the proportion of schools requiring content in core courses regarding social and environmental issues remains low. Murray (2006) complained that sustainability topics often are taught as optional units rather than being integrated into mainstream business courses. In

another study, Biello (2005) listed sixty courses in sustainability offered in accredited graduate programs and in two non-accredited business schools (Bainbridge Graduate Institute and Presidio School of Management) that offer MBAs in sustainable business. Much of the literature concerning sustainability in business schools appears to focus on what skills students should develop and how to integrate sustainability into the curriculum. These topics are discussed below.

Some authors emphasize the development of students' skills when integrating sustainability into the business curriculum. For example, Kearins and Springett (2003) advocated that instructors develop the following skills in students: reflexivity, critique and social action/engagement. Reflexivity would require students to reflect on the personal and societal values that impact on personal and management decisions. Critique requires students to consider issues of power and ideology that shape a given reality, e.g., the way in which a company is organized, to challenge those issues, and to investigate organizational forms that are more democratic. Social action/engagement motivates students to think about ways in which they could act in a more sustainable manner and how they could facilitate making their broader environment more sustainable. Bradbury (2003) discussed experiential exercises in sustainability geared toward management, organization behavior and strategy courses. The intent of these experiential exercises is to prod students into questioning what sustains their own lives, the lives of others close to them, and the organizations in which they work. The experiential exercises could be designed around case studies of companies that have implemented sustainability concepts, personal vision quests (walking around campus and pondering issues important to themselves), exercises that require students to reflect on their personal use of natural resources, and participating in projects to make an environmental improvement.

Regarding research on integrating sustainability into undergraduate business curricula, Bridges and Wilhelm (2008) proposed a framework for integrating sustainability into a marketing curriculum. They discussed a 4Ps (product, price, place/distribution and promotion) approach to curricula in sustainable marketing with which sustainability issues could be included in courses as the 4Ps are presented. Then, they described an MBA elective that they developed and their use of current readings and cases that focus on sustainability. Their future plans include adding an experiential learning activity to the course, creating a database of marketing internships with sustainable firms, requiring students to develop a marketing plan for making the university more sustainable, and starting a speaker series on sustainable marketing strategies.

More recently, Rudell (2011) described her experience with creating a green marketing course for undergraduates at Iona College. She found that her students' environmental consciousness was increased and that those students recognized the importance of their individual actions on the environment. Bates, Silverblatt and Kleban (2009) discussed their experience with creating a new green management course at Florida International University (FIU). Their new course emphasized experiential learning and required students to conduct a sustainability audit at local firms. In addition, Bates, Silverblatt and Kleban (2010) reported on the updating of the business environment management track at FIU. Administration at FIU originally had recommended deleting the track due to low enrollment. The authors analyzed other programs having the words sustainability or environment in their title and/or containing several courses in sustainability. Based on their study, they updated their curriculum to prepare students for green collar jobs in eco-tourism, green management and green trade.

Sustainability and Supply Chain Management Curricula

Integration of sustainability topics in supply chain management courses appears to be just beginning, but promising. For example, Bandyopadhyay (2004) conducted a study of thirty supply chain management courses offered by AACSB accredited universities and identified fourteen key areas in those courses. Reverse logistics/green issues was one of the key areas listed. Roome (2005) reported on a Sustainability and Supply-Chain Management residency (module) offered by OneMBA, a consortium of five MBA

programs located in Hong Kong, Brazil, Mexico, Europe and the U.S. This module used three different types of pedagogy: (1) Lectures, (2) Experiential learning (cases, exercises, projects, and role playing), and (3) Visits to companies. We believe that our Supply Chain & Operations Management program is unique with its emphasis on sustainability throughout the curriculum. We share Doksai's (2010) belief regarding business schools being able to attract more students if they offer environmental courses.

Our Supply Chain & Operations Management program covers the breadth of topics in supply chain management, including sustainability. Our Supply Chain & Operations Management program also has included experiential exercises in sustainability, but unlike the studies reported by Rudell (2011) and Bates, Silverblatt, and Kleban (2009, 2010), neither are we preparing our students primarily for green collar jobs, nor are we in the process of focusing exclusively on green in our major. Most of our graduates work for companies on our advisory board. Although most of those companies engage in green activities, advisory board members want us to prepare our students primarily in the fundamentals of supply chain management and then to provide our students with environmental awareness. Over the last five years, we have not placed any of our Supply Chain & Operations Management students in positions focused solely on green, sustainability or environmental management. Therefore, the intent of our program is to provide students with a solid knowledge of supply chain management concepts augmented with sustainability decision-making tools that they could use, for example, when sourcing products, designing production and warehousing facilities, and selecting projects.

Using AHP for Supplier Selection and Other Multi-Criteria Decisions

The analytic hierarchy process (AHP) was developed by Saaty (1999). AHP was designed to solve multi-criteria problems and requires a decision maker to provide judgments about the relative importance of each criterion and to specify a preference for each decision alternative using each criterion. The result is a priority ranking of the alternatives based on the preferences of the decision maker (Anderson, Sweeney, Williams, & Martin, 2008). AHP has been used in a wide variety of supply chain management problems in the areas of information system project selection (Lee & Kim, 2000), business process improvement project selection (Kendrick & Saaty, 2007), selecting a nonprofit for donation (Ramirez & Saraoglu, 2011), and R&D project selection (Meade & Presley, 2002). Kendrick and Saaty (2007) discussed the use of AHP to select a project portfolio based on the alignment of those projects with the four perspectives of the balanced scorecard (financial, customer, operational, and human resources).

In-Class Exercise Using AHP for Supplier Selection

The possibilities for triple bottom line selection problems in supply chain management are numerous; for example, selecting a new supplier, locating a new plant or warehouse, selecting a smoking cessation program, selecting a wastewater treatment option, etc. Each of the aforementioned projects will affect economic performance, environmental performance within or outside of the facility, and social performance (effects on employees or the community). The exercise described below analyzes the selection of a new supplier to replace a current hazardous material used in the manufacture of a company's product. An explanation of the supplier selection criteria follows:

1. Net Present Value (NPV) includes cost increases and/or decreases in purchase cost, transportation costs, handling costs, landfill costs, etc. Positive values of NPV indicate improved performance.

2. % increase / decrease in hazardous waste: Positive values indicate an increase in the % sent to the landfill, and negative values indicate a reduction in the % send to the landfill. Therefore, negative values indicate improved performance.

3. % reduction in lost workdays: We will assume that none of the alternatives considered will increase lost workdays. Therefore, higher positive values indicate improved performance.

4. The ability to increase the diversity of the supply base: We may use a surrogate measure for this, e.g., the number of female and minority employees at the supplier. Alternatively, we may use a qualitative scale of 1 – 100 to rate the diversity of the supplier. Here, we assume that we use the qualitative scale; therefore, higher positive values indicate improved performance on diversity.

As shown in Table 1, the criteria focus on economic, environmental, and social performance objectives.

Table 1: Estimated Supplier Performance on the Criteria

Criterion	Supplier 1	Supplier 2	Supplier 3
1) NPV	-$100,000	$25,000	$-10,000
2) % increase / decrease in hazardous waste	-5%	-6%	-3%
3) % reduction in lost workdays	4%	2%	2.5%
4) Diversity of supply base	80	60	65

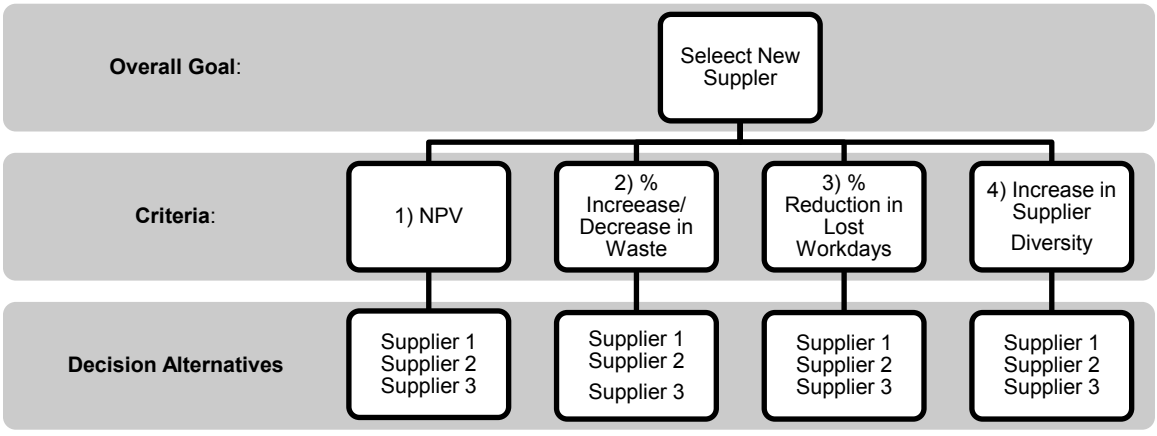
This table shows estimated supplier performance for all three suppliers on the four criteria considered.

Supplier 2 performs best on net present value (NPV), followed by Supplier 3 and then Supplier 1. Supplier 2 performs best on decrease in hazardous waste, followed by Supplier 1 and then Supplier 3. Supplier 1 performs best on percent reduction in lost workdays, followed by Supplier 3 and then Supplier

2. Supplier 1 is rated the best for its diversity, followed by Supplier 3, and then Supplier 2. Clearly, no supplier performs best on all four criteria, hence the need for a multi-criteria approach. Next, we follow the steps in AHP as described in Anderson et al. (2008):

Step 1: Develop a graphical representation of the problem in terms of the overall goal, the criteria, and the decision alternatives. This graph illustrates the hierarchy of the problem: the overall goal, the criteria and the decision alternatives. The graphical representation of the problem is shown in Figure 1.

Figure 1: Graphical Representation of the Supplier Selection Problem



There are four criteria and three decision alternatives. Note: An alternative approach when developing this figure could be to add an additional level of categories of selection criteria, e.g., economic, environmental and social performance above the individual criteria (similar to the approach taken by Kendrick & Saaty, 2007). However, this approach adds to the complexity by requiring more pairwise comparisons and additional calculations.

Step 2: Establish priorities for the criteria. Here, the supply manager must specify how important each criterion is relative to each other criterion. We use a scale from "1" to "9" as shown in Table 2. Using this scale, we perform pairwise comparisons of the criteria.

Table 2: Comparison Scale for the Importance of the Criteria

Verbal Judgment	Numerical Rating
Extremely more important	9
Very strongly more important	7
Strongly more important	5
Moderately more important	3
Equally important	1

This table shows the numerical ratings to be used when making comparisons. Note: Intermediate values are possible, e.g., strongly to very strongly more important would receive a numerical rating of 6.

We need to perform six comparisons for the four criteria as shown in Table 3. We list which of the two criteria is more important, a verbal description of how much more important that criterion is, and a numerical rating of that importance.

Table 3: Pairwise Comparisons of Criteria

Pairwise Comparison	More Important Criterion	How Much More Important	Numerical Rating
Criterion 1 – Criterion 2	Criterion 1	Extremely	9
Criterion 1 – Criterion 3	Criterion 1	Strongly	5
Criterion 1 – Criterion 4	Criterion 1	Moderately	3
Criterion 2 – Criterion 3	Criterion 3	Equally to moderately	2
Criterion 2 – Criterion 4	Criterion 4	Moderately to strongly	4
Criterion 3 – Criterion 4	Criterion 4	Moderately	3

This table lists each pair of criteria, which criterion is more important and the numerical rating of that importance.

Step 3: Complete the pairwise comparison matrix for the criteria. We take the values from Table 3 and start to fill in the initial values of the pairwise comparison ratings in the "Initial Values" panel of Table 4. For example, Criterion 1 was described as extremely more important than Criterion 2. Therefore, we list a "9" in the table at the intersection of the row corresponding to the favored criterion (Criterion 1) and the column corresponding to Criterion 2. We do not need to compare a criterion to itself (we automatically enter a value of "1" in the row and column corresponding to that criterion). Therefore, each cell of the diagonal in the table will receive a value of "1."

Next, we complete the pairwise comparison matrix for the criteria in the "Final Values" panel of Table 4. To show how these values are obtained, consider the numerical rating of "9" for the comparison of Criterion 1 – Criterion 2. We entered a "9" in the cell at the intersection of the row for Criterion 1 and the column for Criterion 2. At the intersection of the row for Criterion 2 and the column for Criterion 1, we enter the reciprocal of "9" = "1/9." We do this for each of the initial values listed in Table 4.

Step 4: Synthesization. We use the final values of the pairwise comparisons to calculate the priority of each criterion in terms of the overall goal of selecting the best supplier. We use the following three-step procedure:

1) Sum the values in each column of the "Final Values" panel of Table 4. These sums are shown in the "Column Sums" panel of Table 4. Note: We use Excel and carry all values to three decimals when summing the values.

2) Divide each rating value in the "Columns Sums" panel by its sum to derive the normalized pairwise comparison matrix (shown in the "Normalized Ratings" panel of Table 4).

3) Average the values in each row of the "Normalized Ratings" panel of Table 4 to derive Table 5 (Average of the Row Values of the Normalized Ratings).

Table 4: Pairwise Comparison Matrix of Criteria

	Criterion 1	Criterion 2	Criterion 3	Criterion 4
Initial Values:				
Criterion 1	1	9	5	3
Criterion 2		1		
Criterion 3		2	1	
Criterion 4		4	3	1
Final Values:				
Criterion 1	1	9	5	3
Criterion 2	1/9	1	1/2	1/4
Criterion 3	1/5	2	1	1/3
Criterion 4	1/3	4	3	1
Column Sums:				
Criterion 1	1.000	9.000	5.000	3.000
Criterion 2	0.111	1.000	0.500	0.250
Criterion 3	0.200	2.000	1.000	0.333
Criterion 4	0.333	4.000	3.000	1.000
Sum	1.644	16.000	9.500	4.583
Normalized Ratings:				
Criterion 1	0.608	0.563	0.526	0.655
Criterion 2	0.068	0.063	0.053	0.055
Criterion 3	0.122	0.125	0.105	0.073
Criterion 4	0.203	0.250	0.316	0.218

The first panel of this table shows the initial values of the pairwise comparison ratings based on the preferred criterion. The second panel shows the final values of the pairwise comparison ratings. The third panel shows the column sums. The fourth panel shows the normalized ratings. For example, looking at the column for Criterion 1, we see that 1.000/1.644 = 0.608, 0.111/1.644 = 0.068, etc.

Table 5: Average of the Row Values of the Normalized Ratings

	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Avg. (Priority)
Criterion 1	0.608	0.563	0.526	0.655	0.588
Criterion 2	0.068	0.063	0.053	0.055	0.060
Criterion 3	0.122	0.125	0.105	0.073	0.106
Criterion 4	0.203	0.250	0.316	0.218	0.247

This table shows the averages across each row (priorities for each criterion).

As shown in Table 5, synthesization provides the priority of each criterion based on the average values (shown in the last column). Criterion 1 is most important, with a priority of 0.588. Criterion 4 is second, with a priority of 0.247. Criterion 3 is third, with a priority of 0.106. Criterion 2 is least important, with a priority of 0.060. Step 5: Check the consistency of the pairwise comparisons. Pairwise comparisons should be consistent. For example, if we look at the final pairwise comparisons in Table 4 (in the "Final Values" panel), we see that the Criterion 4 – Criterion 2 comparison had a rating of "4" (Criterion 4 was rated as moderately to strongly more important). The Criterion 1 – Criterion 4 comparison had a rating of "3" (Criterion 1 was rated as moderately more important). Therefore, the comparison of Criterion 1 to Criterion 2 should have a numerical rating of 4 X 3 = 12. However, this comparison shows a rating of "9" and is inconsistent. How to calculate the overall measure of inconsistency across all pairwise comparisons requires determining a consistency ratio. A consistency ratio of 0.10 or less is considered acceptable. If we calculate a consistency ratio greater than 0.10, we must review and revise the initial values of the pairwise comparisons in Table 4 (Anderson et al., 2008). Anderson et al. (2008) recommend approximating the consistency ratio with the following approach:

1) Multiply each value in the first column of the pairwise comparison matrix (Table 4 – "Final Values" panel) by the priority of the first item (Criterion 1), multiply each value in the second

column by the priority of the second item (Criterion 2), multiply each value in the third column by the priority of the third item (Criterion 3), multiply each value in the fourth column by the priority of the fourth item (Criterion 4), etc. These calculations are shown below. After we have repeated this process for all columns, we sum the values across the rows to determine a vector of values called the "weighted sum" (intermediate calculations using Excel are shown in Table 6).

$$0.588\begin{bmatrix}1\\1/9\\1/5\\1/3\end{bmatrix}+0.060\begin{bmatrix}9\\1\\2\\4\end{bmatrix}+0.106\begin{bmatrix}5\\1/2\\1\\3\end{bmatrix}+0.247\begin{bmatrix}3\\1/4\\1/3\\1\end{bmatrix}=\begin{bmatrix}2.399\\0.240\\0.426\\1.001\end{bmatrix}$$

Table 6: Weighted Sum Values

	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Weighted Sum
Criterion 1	0.588	0.540	0.530	0.741	2.399
Criterion 2	0.065	0.060	0.053	0.062	0.240
Criterion 3	0.118	0.120	0.106	0.082	0.426
Criterion 4	0.196	0.240	0.318	0.247	1.001

*This table shows the intermediate values. For example, in the column under Criterion 1, 0.588 * 1 = 0.588; 0.588 * 1/9 = 0.065; 0.588 * 1/5 = 0.118; 0.588 * 1/3 = 0.196. The weighted sum value is the sum of the values in a given row.*

2) Divide the elements of the weighted sum vector above by the corresponding priority of each criterion.

   Criterion 1: 2.399 / 0.588 = 4.080
   Criterion 2: 0.240 / 0.060 = 4.000
   Criterion 3: 0.426 / 0.106 = 4.019
   Criterion 4: 1.001 / 0.247 = 4.053

3) Compute the average of the values above in 2). This average is denoted as λ_{max}.

$$\lambda_{max}=\frac{4.080+4.000+4.019+4.053}{4}=4.038$$

4) Compute the consistency index (CI) as follows (*n* = number of items being compared*):*

$$CI=\frac{\lambda_{max}-n}{n-1}=\frac{4.038-4}{4-1}=\frac{0.038}{3}=0.0127$$

5) Compute the consistency ratio, which is defined as CR = CI / RI, where RI is the consistency index of a randomly generated pairwise comparison matrix. The value of RI depends on the number of items being compared. Using the table provided on p. 678 of Anderson et al. (2008), RI = 0.90 for *n* = 4.

$$CR=\frac{CI}{RI}=\frac{0.0127}{0.90}=0.0141$$

Given that the consistency ratio is less than or equal to 0.10, we consider this level of consistency acceptable.

Step 6: Perform the other pairwise comparisons to determine the priorities for each supplier alternative using each of the criteria. We use the scale shown in Table 7 to express pairwise comparison preferences for each supplier for each of the four criteria.

Table 7: Comparison Scale for the Preference of Each Decision Alternative

Verbal Judgment	Numerical Rating
Extremely preferred	9
	8
Very strongly preferred	7
	6
Strongly preferred	5
	4
Moderately preferred	3
	2
Equally preferred	1

This table shows the numerical ratings to be used when making comparisons. Note: Intermediate values are possible, e.g., strongly to very strongly preferred would receive a numerical rating of 6.

For brevity, we summarize the pairwise comparisons for each criterion in Table 8. For example, if we look at the original data in Table 1, we see that using Supplier 1 leads to a net present value of -$100,000 and using Supplier 2 leads to a net present value of $25,000. Clearly, Supplier 2 is preferred on this criterion (NPV). How much is Criterion 2 preferred? That answer depends on the subjective judgment of the supply manager. For example, the supply manager may assign a value of "9" for extremely preferred.

Step 7: Synthesize each of the pairwise comparison matrixes for each criterion from the previous step. We follow the three-step procedure specified previously for synthesization, i.e., we would take the values for Criterion 1 (Table 8) and perform the synthesization calculations demonstrated previously. These calculations would provide the average row values (priorities) for each supplier on Criterion 1. After that, we need to check the consistency of the pairwise comparisons for Criterion 1. Assuming that the consistency ratio was less than or equal to 0.10, we repeat the three-step procedure and check the consistency ratios for the remaining three criteria. Here, we assume that we checked the consistency ratio for each criterion, and each consistency ratio was acceptable (CR $\leq$ 1.0). The averages of the row values (priorities) from the synthesization three-step procedure, similar to the last column of Table 5, are shown in Table 9.

Table 8: Criteria Pairwise Comparison Matrix

	Supplier 1	Supplier 2	Supplier 3
Criteria 1:			
Supplier 1	1	1/9	1/5
Supplier 2	9	1	2
Supplier 3	5	1/2	1
Criteria 2:			
Supplier 1	1	1/2	3
Supplier 2	2	1	4
Supplier 3	1/3	1/4	1
Criteria 3:			
Supplier 1	1	5	3
Supplier 2	1/5	1	1/2
Supplier 3	1/3	2	1
Criteria 4:			
Supplier 1	1	4	3
Supplier 2	1/4	1	1/2
Supplier 3	1/3	2	1

This table shows the preference ratings for each pairwise comparison on all four criteria.

In Table 9, we see that Supplier 2 is the preferred alternative based on Criterion 1 (0.615), Supplier 2 is the preferred alternative based on Criterion 2 (0.557), Supplier 1 is the preferred alternative based on Criterion 3 (0.648), and Supplier 1 is the preferred alternative based on Criterion 4 (0.623). No supplier is the clear favorite; therefore, one more step is needed as described below.

Step 8: Develop an overall priority ranking for the three alternatives. In this step, we weight each supplier's priority (Table 9) by the corresponding criterion priority (last column of Table 5) as follows:

Overall Priority of Supplier 1:
0.588(0.066) + 0.060(0.320) + 0.106(0.648) + 0.247(0.623) = 0.281

Overall Priority of Supplier 2:

0.588(0.615) + 0.060(0.557) + 0.106(0.122) + 0.247(0.137) = 0.442

Overall Priority of Supplier 3:
0.588(0.319) + 0.060(0.123) + 0.106(0.230) + 0.247(0.239) = 0.278

Based on the overall priorities above, Supplier 2 is preferred, followed by Supplier 1, and then Supplier 3.

Table 9: Average of the Row Values (Priorities) for Each Supplier for Each Criterion

	Criterion 1	Criterion 2	Criterion 3	Criterion 4
Supplier 1	0.066	0.320	**0.648**	**0.623**
Supplier 2	**0.615**	**0.557**	0.122	0.137
Supplier 3	0.319	0.123	0.230	0.239

This table is a result of synthesizing the ratings for each criterion contained in Table 8 and combining those values into a single table.

SUMMARY

The goal of this paper was to demonstrate an in-class exercise using (AHP) for analyzing supplier alternatives based on triple bottom line criteria. We presented triple bottom line criteria along with performance metrics for each criterion. To use AHP, the decision maker (supply manager) had to compare criteria to each other to determine which were more important. Then, the decision maker had to compare the performance of different decision alternatives (suppliers) on each criterion. The outcome of the AHP process was an overall ranking of the three supplier alternatives. The benefits of this exercise follow: (a) students learn about triple bottom line metrics, (b) students learn how to rate the importance of those metrics when making a decision and (c) students learn how to apply a multi-criteria decision-making technique. To teach AHP to our students in this course, we plan to provide them with a copy of the exercise contained in this paper along with the Excel spreadsheet used to perform the calculations. One possible limitation is the difficulty of adapting this exercise to problems with different parameters (e.g., a different number of criteria and/or a different number of suppliers). Our future research will assess this difficulty by requiring students to solve a problem with different parameters. In addition, we plan to require students to apply this AHP approach to a real-world scenario in which they have to work with a supply manager to make such a decision.

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BIOGRAPHY

Dr. Godfrey earned his B.S. in Operations Management and M.S. in Management Information Systems from Northern Illinois University, and his Ph.D. in Production & Operations Management from the University of Nebraska - Lincoln. He is department chair of the Supply Chain & Operations Management department at UW Oshkosh. He is a CFPIM, CIRM, and CSCP through APICS and a CPSM through ISM. Email: godfrey@uwosh.edu

Dr. Manikas earned his B.S. in Computer Science and M.B.A. in Materials and Logistics Management from Michigan State University, and his Ph.D. from The Georgia Institute of Technology. Prior, he worked as an instructor for i2/JDA and as a management consultant for KPMG Peat Marwick and Deloitte Consulting. Email: manikasa@uwosh.edu

EXPERIENTIAL LEARNING: THE INTERNSHIP AND LIVE-CASE STUDY RELATIONSHIP

Robert D. Green, Lynn University
Farideh A. Farazmand, Lynn University

ABSTRACT

Educators are increasingly using experiential learning pedagogy to improve learning (knowledge and skills). Two highly effective experiential methods are live-case study projects and internships. This study examines the learning outcomes of courses with live-case study projects for students who have had a prior internship experience and those who have not as well as correlation analysis for each group. The results find that prior internship experience does improve applied project learning outcomes. Furthermore, the findings have implications of the importance for the integration of knowledge and skills development and the benefit of the live-case approach to particular student populations.

JEL: I21, A22, M31

KEYWORDS: Experiential learning, internships, business and marketing education

INTRODUCTION

Employers' expectations for the preparation of college students' employment are challenging to educators. In a recessionary, high unemployment economy and highly competitive markets, businesses are reducing costs and seeking better value (well-prepared students) for hiring entry-level positions. For example, companies are reducing skills training for newly hired college graduates (Georges, 1996; Kelley and Bridges, 2005). Therefore, the responsibilities for professional and career development skills continue to increase for educators. Furthermore, accreditation organizations have recognized the critical role business schools play in lifelong learning and skills development (Association to Advance Collegiate Schools of Business, 2010) and learning outcomes (Association of American Colleges and Universities, 2010; Duke, 2002) to prepare students for successful professional careers in which such standards require assurances of learning (Association to Advance Collegiate Schools of Business, 2007).

Major teaching-learning strategies are experiential learning activities to achieve assurances of learning standards (Association to Advance Collegiate Schools of Business, 2010) and to meet expectations for employers (Lamb, Shipp, and Moncrief, 1995) and by students (Karns, 2005). Association to Advance Collegiate Schools of Business (AACSB) encourages active learning, e.g., Standard 13, in that "passive learning is ineffective and of short duration" (2010, p. 56). Lamb et al. conclude, "As skill acquisition and refinement becomes more important to students and employers, marketing departments will be called upon to engage in skill development in a systematic, demonstrable way" (1995, p. 18). Moreover, Karns found "undergraduate students' perceptions of learning activities are now structured by the degree to which the activities are enjoyable, challenging, and real world" (2005, p. 170).

Two prevalent, highly effective experiential learning pedagogies are internships and live-case projects (Farazmand, Green and Miller, 2010; Gupta, Burns, and Schiferl, 2010; Karns, 2005). Internships are perceived by students as being successful if they have positive experiences, gain personal benefits, and improve their employment prospects (Gupta et al., 2010). However, student internships are likely a one-semester experience and an optional (elective) course. On the other hand, live-case projects may be experienced in multiple courses and perceived as being successful by students and businesses (Elam and Spotts, 2004; Farazmand et al., 2010). Integrating skills and knowledge is an important focus of

experiential learning (Elam and Spotts, 2004; Lamb et al., 1995). With the same importance, skills development in different types of experiential courses should be integrated (Lamb et al., 1995). Therefore, the purpose of this study is to examine the relationship of prior internship experience and live-case projects. Hence, does an internship experience improve live-case project learning outcomes? This study includes a review of the experiential learning literature, the methodology, data analysis findings, the discussion of the results, limitations of and future opportunities from this research, and the conclusion.

LITERATURE REVIEW

In recent years, many higher education institutions have integrated learning by doing experiential methods of teaching-learning to their curricula to enhance learning outcomes of their programs (Aldas, Crispo, Johnson and Price, 2010). Accreditation organizations, educators and students have reported experiential learning activities effective in enhancing students' knowledge, skills and developments for future career success (Association of American Colleges and Universities, 2010a; Association of American Colleges and Universities, 2010b).Business schools, particularly marketing discipline have implemented the experiential methods of teaching by incorporating hands on, real projects to different courses.

Titus and Petroshius (1993) assess the learning outcomes of an undergraduate consumer behavior course with an experiential project. The students' learning from the course and implication of the project include, hands-on experience, analytical skill in the market place, synthesizing theory and practice and relating marketing concepts to real world application, design and execution of a marketing project, and appreciation for marketing research. Geringer, Stratemeyer and Canton (2009) integrate a service project for a non-profit organization to thirty-eight sections of marketing concept course. Geringer et al. (2009) state that the service project learning outcomes showed enhancement and development in students' academics knowledge, skills, attitudes, career development and civic responsibilities.

Furthermore, Walsh (2002) explains how a SUNY College at Oneonta undergraduate student Marketing Club has successfully conducted a number of major marketing research projects and consulting services for the community private and public organizations. Walsh points out that most of their Marketing Club projects have been presented to the community organizations as written projects resulted in enhancing students' learning objectives. Students have acquired valuable skills such as collaborative and creative processes, consulting, teamwork and communication, in addition to personal growth and self-esteem and motivation development. Experiential learning can be incorporated into a college curricula in various forms, among them are live case projects and internship (Aldas et al., 2010; Farazmand et al., 2010; Gupta et al., 2010; Karns, 2005). Business schools have been using internship programs as a linkage between academic program and work to prepare students for transition from academia to the business world (Walker, Turner, Shoffner and Gibson, 2001). Though internship might not be considered of academic value by some faculty who consider internship as non-academic experience (*International Educator*, 2004), but internship experience has been reported as one of the effective components of academic preparations (McClam, 2000).The current study examines the relationship of prior internship and live-case projects. The positive impacts of internship experience on learning outcomes of an academic course could indicate the academic value of internship. Walker et al. (2001) suggest that integration of multiple experiential learning projects into different courses during the four-year college curricula enhances the impact of the internship in junior-senior year. This study examines the learning outcomes of courses with live-case study projects for students who have had a prior internship experience and those who have not.

The Experiential Learning Study

The experiential projects were conducted at Lynn University (LU), Boca Raton, Florida. LU is an independent, coeducational, residential institution with 2,224 students (1,786 undergraduate and 438

graduate) from 46 states and 81 nations. LU has a 17:1 student-to-faculty ratio and offers baccalaureate, master and doctoral degrees. The University has six colleges of which the College of Business and Management is the largest (Lynn University, 2010).

The projects for this study were for five upper level marketing courses (Consumer Behavior, Marketing Communications, Global Marketing, Marketing Research, Business Marketing Management) in the College of Business and Management during three consecutive semesters (Fall 2009, Spring and Fall 2010). Each course was structured exactly the same with the exception of the type of marketing project. Generally, class sessions met on Tuesdays and Thursdays for 75 minutes. Depending on the semester, examinations were 30% of the course grade, course project ranged from 30% to 50%, and other assignments 20% to 40%. The courses allocated time of approximately 60% classroom meetings and 40% field research and project development. Since 2000, the College of Business and Management (CBM) has had a relationship with SCORE, a partner of the U.S. Small Business Administration, to provide "real world" learning opportunities for CBM students. Prior to each semester, the course instructor worked with a SCORE Counselor to develop a course project.During the semester, the same Counselor would be a co-instructor for the courses and in the classroom approximately 50% of the class sessions, primarily during the student teams' project development period. However, the businessperson also would be in class the first week of the semester and a few sessions during the textbook learning period to discuss pre-project topics and answer any questions about the project. During this three-semester period, the same Score Counselor, a highly successful businessperson in manufacturing, provided the business project for and worked with 132 traditional undergraduate students.

METHODOLOGY

Although the semester was in two parts – textbook (assignments and examinations) and project (field research and presentations), the two were integrated with knowledge content and skills development by specific requirements (Lamb, et al, 1995). The first part of the semester was focused on textbook assignments and the last part was only for developing the course-learning project. As an example, for the textbook chapter assignments, instructor-developed discussion questions were required that linked the text to the project. Moreover, each course had instructor-developed project guidelines in which textbook concepts were to be applied in the live-case project. These were detailed but were flexible enough for student teams to be adaptive and innovative to complete their experiential learning project.

During the field research and project development period, there were no class sessions for one day of the week. The teams used the classroom for meetings and the instructor was available for assistance. In addition, required business/project meetings were held with the businessperson and the instructor during the second scheduled class day each week. These meetings were to report (project status) and for informational (ask questions) purposes. For the last week of the semester, each team made an oral presentation using PowerPoints and submitted a written plan to the instructor and businessperson. At the time of the written submission, each team individually rated or evaluated (based on a total of 100%) all team members as to their contribution to the project with no two members having the same rating (percentage). The projects were evaluated (graded) and returned to students during the scheduled Final Week class session. This provided an opportunity for students to ask questions/make comments for timely feedback. The three semester courses had a different applied project.

While the same semester courses had the common project concept, they had very different project assignments. For the consumer behavior course, teams selected a target market, used the Engel, Kollat, Blackwell (EKB) model (Blackwell, Miniard and Engel, 2006), and developed a marketing strategy based on their consumer market behavioral findings. For the marketing communications course, teams selected different target audiences, and completed an integrated marketing communications plan. Global marketing teams identified different countries, and developed an international marketing plan. For the

marketing research course, teams chose different target markets, and developed a research proposal and did a market research study. Finally, business marketing teams selected different target markets, and developed a business marketing plan.

Lynn University requires all undergraduate students to complete a 3 credit hour (150 hours of work) internship at a student-selected organization. Generally, the internship course is completed during the junior year or the first semester senior year. Therefore, students in the upper level marketing course might have completed an internship. In this study, 132 students participated in the live-case projects during the three semesters of which 55 had completed an internship and 77 had not. There were 73 males and 59 females. The vast majority was College of Business and Management students (94.7%), and only six students were from the College of International Communications (4.5%) and one for the College of Liberal Studies (0.8%). The students tended to be juniors in academic level (56.8%).

While there was a large representation of international students (37.1%), U.S. students were the majority (62.9%). More than two-thirds of the students lived off-campus (68.9%) and the remaining students lived on-campus (31.1%). About one-half of the students (53.8%) did not belong or were associated with a University organization, e.g., student government, fraternity or sorority, athletic team. About four out of ten students did not have a paying Summer job (42.4%) but most of those who did worked 30 or more hours (28.8%). During the semester of the course, most students did not work (73.4%) but most of those who did worked less than 20 hours (19.0%). See Table 1 for specific student characteristic details.

Students were given three surveys during each semester. First, at the beginning of the semester (pre-test) they provided demographic information (e.g., gender, citizenship), campus experiences (e.g., student activities), educational experiences (e.g., credits earned, internship completion), and their perception of examinations and applied projects with six 5-point Likert-type scale items. Second, another survey was completed before beginning the project (mid-term test) in which the six items (5-point Likert scale) were asked gain. Third, at the end of the semester (post-test) the six items were asked but the verb tense was changed from future tense to past tense. See Table 2, Panel A for the post-test items.

As shown in the table, these items were developed measuring students' applied project perceptions and experiences as (1) knowledge, (2) skills, (3) personal development, or (4) both knowledge and skills. Additional data were included as to the teams' ranking of each member with no two students in the team having the same ranking and was used to compute individual student's applied project score. Furthermore, other data provided for the study were from the instructor or the University, e.g., examination and applied project scores, cumulative grade point average.

Findings

The purpose of this study is to examine the relationship of a prior internship experience and live-case projects. The data were analyzed and the findings are reported by two methods. First is a comparison between students who had completed an internship (n=55) and those who had not (n=77) using t-Tests. Second determines what factors (variables) influence learning outcomes using multiple regression. Learning outcomes (dependent variable) are determined by two measures – the students and the instructor.

Table 1: Students' Characteristics with and without Internships

Student Characteristics	Students with Internship		Students without Internship		Total Students	
	Number	Percent	Number	Percent	Number	Percent
Total	55	41.7	77	58.3	132	100.0
Gender						
Male	36	65.5	37	48.1	73	55.3
Female	19	34.5	40	51.9	59	44.7
Academic Major						
College of Business & Mgt.	54	98.2	71	92.2	125	94.7
College of Int'l. Comm.	1	1.8	5	6.5	6	4.5
College of Liberal Studies			1	1.3	1	0.8
Academic Year						
Freshman (29 or less credits)						
Sophomore (30 to 59 crs.)	1	1.8	11	14.3	12	9.1
Junior (60 to 89 credits)	26	47.3	49	63.6	75	56.8
Senior (90 or more credits)	28	50.9	17	22.1	45	34.1
Citizenship						
U.S.	33	60.0	50	64.9	83	62.9
Not U.S.	22	40.0	27	35.1	49	37.1
Residence						
On-Campus	17	30.9	24	31.2	41	31.1
Off-Campus	38	69.1	53	68.8	91	68.9
University Organizations						
None	37	67.3	34	44.1	71	53.8
One	9	16.4	24	31.2	33	25.0
Two	8	14.5	11	14.3	19	14.4
Three	1	1.8	1	1.3	2	1.5
Four of More			7	9.1	7	5.3
Summer Employment (weekly)						
No Paying Job	23	41.8	33	42.8	56	42.4
Job Less than 10 Hours	2	3.6	6	7.8	8	6.1
Job 10 to 19 Hours	3	5.5	9	11.7	12	9.1
Job 20 to 29 Hours	6	10.9	12	15.6	18	13.6
Job 30 or More Hours	21	38.2	17	22.1	38	28.8
Semester Employment (weekly)						
No Paying Job	41	74.5	56	72.7	97	73.4
Job Less than 10 Hours	5	9.1	5	6.5	10	7.6
Job 10 to 19 Hours	4	7.3	11	14.3	15	11.4
Job 20 to 29 Hours	3	5.5	4	5.2	7	5.3
Job 30 or More Hours	2	3.6	1	1.3	3	2.3

This table shows student sample demographic, educational and work experience information. This information is presented in detail (number and percentage) by students with internship experience, students with no internship experience and all students in the sample.

In Table 2, Panel A, the internship and non-internship experienced students' post-test results are compared using the t-Test method in which the items were measured by a 5-point Likert type scale (1 = strongly agree to 5 = strongly disagree). Four of the six items and the total mean score (unweighted for the six items) show significant differences. Students who had an internship course had a better learning experience, e.g., knowledge, skills, and knowledge and skills, than those who did not have an internship experience. The positive impact of an internship by enhancing students' knowledge and skills shows (1) the academic value of an internship and (2) that the integration of an internship and courses with live-case project enhances the impact of experiential teaching pedagogy. The two items in which there were no significant differences, e.g., personal development and skills (team experience), were consistent with the significant items in that the internship experienced students had a more positive experience (lower mean scores). In Table 2, Panel B the project grades (1 = A to 5 = F) were not significantly different between the two groups. However, students without internship experience did better (lower mean scores).

Table 2: Project Score Related Results Comparison between Internship and Non-Internship Experienced Students

Panel A: Student-Reported (Post-test)				
Item	Students With Internship Mean	Students Without Internship Mean	Standard Deviation	Mean Difference
Learned more about Marketing in this course than a Marketing course without a service (applied) learning project. (*Knowledge*)	1.56	1.87	0.601	-0.31**
Developed better or new skills in this course than a Marketing course without a service (applied) learning project. (*Skills*)	1.55	1.92	0.757	-0.37*
Look forward to doing another service (applied) learning course project in the future. (*Personal Development*)	2.00	2.26	1.122	-0.26
Look forward to working in a team in the future. (*Skills*)	2.24	2.43	1.208	-0.19
Did better in this course that had both examinations and a service (applied) learning course project than without such as project. (*Knowledge and Skills*)	1.87	2.26	0.944	-0.39**
A service (applied) learning project has benefited me more in meeting my career goals than a course without such a project. (*Knowledge and Skills*)	1.74	2.07	0.5339	-0.33**
Mean Score for the 6 student-reported items	1.83	2.14	0.6526	-0.31**

Panel B: Instructor-Reported				
Item	Students With Internship Mean	Students Without Internship Mean	Standard Deviation	Mean Difference
Project grade	2.15	1.88	1.214	0.27

*This table presents t-Test results by comparing students with and students without an internship experience. The significance levels are shown as * $p < 0.01$ and ** $p < 0.05$. In Panel A, the self-reported results are from the post-test with six 5-point Likert-type scale items (1 = strongly agree to 5 = strongly disagree). This panel also shows the mean score for the six items. In Panel B, the instructor's project score results (1 = A to 5 = F) are reposted.*

For multiple regression analysis, learning outcomes as the dependent variable includes the students' post-test results (self-report) and their applied project grades (instructor-report) with equal weight for each. Pearson correlation coefficient analysis examined the bivariate relationships between specific independent variables (gender, U.S. citizen, rank in team, mid-term response) and the dependent variable (total project score). The results are shown in Table 3. No findings exceed .400, indicating acceptable levels of correlation. Of particular interest, the total project score (dependent variable) is significant ($p < 0.01$) with the four independent variables, and has a negative correlation with gender and U.S. citizen. As well, these two variables have an inverse relationship with all of the other variables. There is a negative, significant correlation ($p < 0.05$) gender and rank in team.

To determine the relationships of the independent variables and the dependent variable multiple regression models (forward stepwise) were tested for all students, students with internship experience, and students without an internship course. The independent variable is included in the model only if it is significant at or less than 0.05. For all students, the explained variance (adjusted R^2) was 37.5%. Four independent variables were included in the equation. Mid-term response and rank in team have positive relationships to total project score. However, gender (coded as 1 = male, 2 = female) and U.S. citizen (coded as 1 = yes, 2 = no) have negative relationships. Therefore, the regression model (Table 4, Panel A) is:

> All Students = 1.246 + 0.430 (mid-term response) + 0.293 (rank in team) – 0.233 (gender) – 0.199 (U.S. citizen)

Table 3: Internship and Non-Internship Experienced Students Correlations for Applied Projects

Variables	Gender	U.S. Citizen	Rank in Team	Mid-Term Response	Total Score	Project
Gender	1.000					
U.S. Citizen	-.123	1.000				
Rank in Team	-.202**	-.078	1.000			
Mid-Term Response	-.013	-.050	-.075	1.000		
Total Project Score	-.256*	-.225*	.348*	.376*	1.000	

*This table presents the inter-correlations between the study variables relative degree of association (positive and negative). The significance levels are indicated as * $p < 0.01$ and ** $p < 0.05$.*

For students with an internship experience, the explained variance (adjusted R^2) was 26.3%. Two independent variables were included in the equation. Gender had an inverse relationship for total project score. However, mid-term response had direct relationships to total project score. Hence, the regression model (Table 4, Panel B) is:

Students with Internship Experience = 2.288 – 0.494 (gender) + 0.293 (mid-term response)

For students with no prior internship course, the explained variance (adjusted R^2) was 40.5%. Two independent variables were included in the equation. Mid-term response and rank in team have positive relationships to total project score. Therefore, the regression model (Table 4, Panel C) is:

Students without Internship Experience = 0.132 + 0.570 (mid-term response) + 0.308 (rank in team)

Therefore, mid-term response is a major variable factor (variable) in predicting live-case projects success in that it was included in all three equations.

DISCUSSION

Employers are expecting better-prepared college graduates with having greater, more advanced skills (Association of American Colleges and Universities, 2010b; Lamb et al., 1995). This appears to be a result of businesses reducing skills development budgets for recent college graduates training (Kelley and Bridges, 2005). An important pedagogical strategy to address and develop better student skills is experiential learning, e.g., internship experiences, live-case study projects (Karns, 2005). As with content knowledge, skills development experiences should be integrated (Lamb et al., 1995). Internships usually occur with only one experience (course), while live-case studies may be integrated into multiple courses.

Therefore, this study examines, does an internship experience improve live-case project learning outcomes? The findings are that an internship does improve live-case project learning outcomes. The results from this study are supported by seven specific findings.

First, in the comparison of the two groups students with prior internship experience reported lower mean scores (strongly/somewhat support) for all six items for their live-case project learning experience than those without an internship. See Table 2. Second, of the six items four were significantly different between the two groups. Students with a prior internship "developed better or more skills" with the project ($p < 0.01$). They also "learned more" in a course with a project ($p < 0.05$). Interesting in that these students recognized the importance of knowledge and skills in which they "did better in this course that had both examinations and a service (applied) learning project" ($p < 0.05$). Students with an internship course also realized that the live-case project "benefited (them) more in meeting (their) career goals than a course without such a project" ($p < 0.05$) than students without an internship experience.

Third, the highest mean score (somewhat agree) related to working in teams. While not significant, students with an internship had a lower mean score (looked more favorable to another team project) than

the other students. This may have been a result of the internship experience with an organization that involved them in team situations, a "real world," out-of-classroom/off-campus experience.

Table 4: Course Project Regression Models for Internship and Non-Internship Experienced Students

Panel A: All Students					
$R^2 = 0.395$	Adjusted $R^2 = 0.375$	Std. Error = 0.56012	F = 19.447	Significant F = 0.000	
Variable	Regression Coefficient	Standard Error	Standardized Coefficient	T-Value	Significance
(Constant)	1.246	0.365			
Mid-Term Response	0.512	0.085	0.430	6.008	0.000***
Rank in Team	0.343	0.087	0.293	3.938	0.000***
Gender	-0.332	0.106	-0.233	-3.127	0.002**
U.S. Citizen	-0.289	0.105	-0.199	-2.746	0.007**

Panel B: Students with Internship Experience					
$R^2 = 0.290$	Adjusted $R^2 = 0.263$	Std. Error = 0.62125	F = 10.639	Significant F = 0.000	
Variable	Regression Coefficient	Standard Error	Standardized Coefficient	T-Value	Significance
(Constant)	2.288	0.354			
Gender	-0.744	0.178	-0.494	-4.186	0.000***
Mid-Term Response	0.382	0.154	0.293	2.489	0.016*

Panel C: Students without Internship Experience					
$R^2 = 0.423$	Adjusted $R^2 = 0.405$	Std. Error = 0.54037	F = 24.161	Significant F = 0.000	
Variable	Regression Coefficient	Standard Error	Standardized Coefficient	T-Value	Significance
(Constant)	0.132	0.296			
Mid-Term Response	0.636	0.104	0.570	6.096	0.000***
Rank in Team	0.338	0.103	0.308	3.298	0.002**

*This table shows the regression estimates for all students, students with an internship experience and students without an internship. The significance levels for each independent variable are indicated as * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$. Panel A shows All Students = 1.246 + 0.430 (mid-term response) + 0.293 (rank in team) – 0.233 (gender) – 0.199 (U.S. citizen). Panel B presents Students with Internship Experience = 2.288 – 0.494 (gender) + 0.293 (mid-term response). Panel C shows Students without Internship Experience = 0.132 + 0.570 (mid-term response) + 0.308 (rank in team).*

Fourth, in determining predictors (multiple regression equations) for project success mid-term response was significant ($p < 0.05$) in the three equations (all students, students with internship experience, students without internship experience). See Table 4. This may be explained by "educators should be intentional about carefully explaining (even selling) the merits of their pedagogical choices as helping prepare students for their future. …. In sum, marketing educators should help students see the alignment between the course design (learning goals and learning activities) and the students' own goals for their future" (Karns, 2005, p. 170). While the students in this study were given the same six items at the beginning of the semester (pre-test response), it was not significant (as a predictor) to the project success. Therefore, in experiential learning, the pedagogy "selling" should continue throughout the semester for student "buy-in" to this teaching and learning method. Furthermore, to contribute to this effort, there should be continual integration of knowledge and skills (Lamb et al., 1995) to foster successful leaning outcomes. Fifth, internship experience was a significant factor for female students' project success.

As well, and sixth, being an international student was a factor for all students. Both groups, being minorities (females in business school and international students at a U.S. university), might have been more motivated to learn and achieve project success. Seventh, as expected rank in team was a significant

predictor for all students. Students provided a peer-evaluation at the end of the course and project grades were computed accordingly. Not only have professional accrediting organizations, e.g., AACSB, recognized the need for experiential learning but other higher education organizations have too, including those that have liberal education focuses, e.g., Association of American Colleges and Universities (AACU). In a recent survey of employers, AACU found revealing results – 79% of the employers wanted more college emphasis on integrative and applied learning (Association of American Colleges and Universities, 2010b). Furthermore, they also found employers wanted more intellectual and practical skills, e.g., written and oral communication (89%), critical thinking and analytic reasoning (81%), complex problem solving (75%), teamwork in diverse groups (71%), creativity and innovation (70%), information literacy (68%), quantitative reasoning (63%). This study has specific limitations. It is at one university, in one academic area, one instructor and only undergraduate students.

These are factors that this study's results cannot be generalizable. However, this does provide future research opportunities and basis for other universities, academic areas and graduate students. Based on the findings from this study, student internship experience positively influences live-case projects' learning outcomes. However, it remains unknown the relationship between students who have had a prior live-case project experience and a successful internship. Universities, particularly business schools have difficulties in getting students to take an elective internship course (Gupta et al., 2010), and the live-case experience would introduce the student to experiential learning which could lead to more internship interest. Furthermore, universities have student retention as a high priority, particularly in their first year. A study of interest and benefit would be including in an introduction, freshman level, business course with a live-case project as part of the "freshman experience" to determine if student retention increases.

CONCLUSIONS

The purpose of this study was to examine the relationship of prior internship experience and live-case projects; does an internship experience improve live-case project learning outcomes? The results were that prior internships do improve live-case course projects learning outcomes, indicating the academic value of an internship. The results also complements Walker et al. (2001) in that integration of an internship and multiple experiential learning projects into different courses during the four year business school curricula has a stronger effect on student learning. Specific findings were students with prior internships had better learning outcomes in comparison to those who did not and the student "buy-in" to the projects were significant regardless of a prior internship. Minorities, e.g., females and international students, benefitted more than other students did. Prior internship experience for females was a significant factor for their project success.

Employers are reducing budgets for new college graduate skills training but have higher expectations for better and more skills from them. As a result, educational organizations are encouraging, expecting better and more skills development during the students' college experience. This must be achieved through learning, the integration of knowledge and skills within courses and across the curriculum. Experiential learning is a pedagogy that enables such successful learning outcomes. The two most effective experiential learning experiences are live-case projects and internships, and this study has provided a better understanding of each and their inter-relationship.

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BIOGRAPHY

Robert D. Green, D.B.A., is Professor of Marketing in the College of Business and Management at Lynn University. He has held faculty positions in the U.S. and internationally. Dr. Green has had articles in *International Journal of Management and Marketing Research*, *Journal of Business & Entrepreneurship* and more than 60 other referred publications. He serves on the Editorial Board for the *International Journal of Management and Marketing Research* and *Business Education & Accreditation*. He can be contacted at: College of Business and Management, Lynn University, 3601 North Military Trail, Boca Raton, Florida 33431 USA. Email: rgreen@lynn.edu

Farideh A. Farazmand, Ph.D., is Professor of International Business in the College of Business and Management at Lynn University. She teaches graduate and undergraduate courses and serves as Coordinator of the Ph. D. Program in the College of Business and Management. Dr. Farazmand has published in several refereed journals, including *Journal of International Business Research, Business Education & Accreditation* and *Academy of Educational Leadership Journal*. Her research and publications are in the areas of international business negotiation, culture, teaching pedagogy and public finance. She can be contacted by email at ffarazmand@lynn.edu.

UNDERGRADUATE STUDENT PERCEPTIONS OF A FREE TEXTBOOK ALTERNATIVE

Andy Lynch, Southern New Hampshire University
Brooke Ratto, Southern New Hampshire University

ABSTRACT

Course content for business students should be relevant, accessible and affordable. Business and library faculty collaborated to provide undergraduate students enrolled in three sections of Introduction to Marketing with a free online content option. This option included embedded links for all course key terms and concept strategically placed in a Blackboard course site. The 87 enrolled students earned extra credit by participating in 10 surveys throughout the semester. Using content format (traditional textbook, e-book only or combination of both) as an independent variable, authors measured student perception of content quality and convenience. Findings indicate that students who used the embedded e-book links prefer this option to traditional textbooks for relevancy, accessibility and affordability. This paper discusses findings and proposes a model that promotes business and library faculty collaboration, the harnessing of existing electronic library resources and distribution of those resources to students in face-to-face, hybrid and online course environments. Recommendations for application of this model to other courses and disciplines are also discussed.

JEL: I23; M30

KEYWORDS: E-books, textbook alternatives, undergraduate, pedagogy, Blackboard

INTRODUCTION

Given the digital age, information technology is a critical element of higher education. No longer are traditional textbooks the sole source of reliable, foundational course content. Electronic library resources and the internet often provide content that can support learning outcomes and serve as viable alternatives to traditional textbooks. While developing a syllabus over the summer months for an Introduction to Marketing course, a Business faculty member identified the e-book database Books 24x7, accessible via the university library, which contained updated and relevant content in support of all course key terms and concepts.

This discovery led to the following research questions: Is it possible to embed e-book database content in the Blackboard Learning Management System as an alternative to an assigned course textbook? How will students respond to the option of choosing a traditional textbook or relying on embedded links? These questions provided the inspiration for the development of this pilot course that resulted in this study.

Business and library faculty collaborated at the course level to provide undergraduate marketing students with three content options (traditional textbook, embedded e-book links from the Books 24x7 database, or a combination of the two), as the foundational content for the course. The faculty posted online surveys in the Blackboard course site at intervals throughout the term to monitor student feedback on their experience using both the traditional textbook and embedded e-book link options. Results indicate high acceptance rates of an embedded e-book link option by students resulting in increased demand for and awareness of library resources. The comparison of student perceptions of content quality and convenience indicated there was no statistical significant difference between groups that used the traditional textbook, embedded e-book links or a combination of the two.

The remainder of the paper is organized as follows. Section 2 briefly discusses the relevant literature. Data selection and research methodology are described in Section 3. Section 4 provides analysis and interpretations of the findings and Section 5 concludes the paper and offers lessons learned.

LITERATURE REVIEW

There is a recognized need for a change in pedagogical practices based on the assumption that, "within five years today's K-12 students will be showing up at colleges and universities with substantively different cultural attitudes towards e-books than today's students" (Nelson, 2008 p. 52). Nelson argues, "higher education must position itself to be ready to incorporate e-books effectively on campus" (p. 52). Using e-books in the university classroom promotes a shift in teaching pedagogy that caters to the diverse learning styles of students in the digital age (Grensing-Pophal, 2010). This shift is not only potentially beneficial for student learning but for competition in the higher education market. In Grensing-Pophal's *EContent* article (2008), Trevor James of North Park University (Chicago) suggests that colleges and universities that adapt earlier to the e-book in the classroom model will "have an edge in the marketplace" (p. 20).

Currently, there is much speculation in the media regarding the demise of the print textbook (Grensing-Pophal, 2010; Nelson, 2008; Birnbaum, 2004). The cost associated with textbooks is perhaps the most obvious factor in students' dissatisfaction. The cost of the "average" college textbook (Kingsbury & Galloway, 2006) increased 186% between 1986 and 2004 helping annual textbook costs reach $900 per student (Waldman, 2010). Such dramatic increases are largely due to the practice of "textbook bundling," or packaging the print material with multimedia supplements that may be superfluous. Yet, high cost is not the only negative aspect of the traditional textbook model. Textbook publishers release new editions of titles every few years, making up-to-date materials impossible to keep up with for the students, faculty and university library (Buczynki, 2007). Print textbooks are also notably bulky and environmentally unfriendly (Shepperd, Grace, & Koch, 2008).

Price increases, bundling and rapid release of new editions have forced university students to seek alternatives to traditional textbook acquisition. Common practices in the past, as well as the present, include purchasing used copies from the university bookstore or on the internet via Amazon and similar web vendors. A recent development in the textbook industry is students' ability to rent their books through the university bookstore or other rental providers (Christensen, E., 2010). The rise of publisher-marketed electronic textbooks (e-textbooks) has also recently made its mark on higher education (Shepperd et al., 2008; Kingsbury & Galloway, 2006). Although prices of such e-textbooks are lower than their print counterparts are, this model is still purchase-driven and places the financial burden on the student.

One method of addressing the perceived unfair costs associated with print textbooks *and* the evolving learning styles of today's digital natives is by adopting for use library subscription electronic resources, and electronic books (e-books) specifically, as the course "textbook." While e-books may not be appropriate for all disciplines and university courses, studies have shown that the e-book model works especially well in the business disciplines (Buczynski, 2007; Jamali, Nicholas, & Rowlands, 2009; Nicholas, Rowlands, & Jamali, 2010; Dillon, 2001). Moreover, several studies indicate that students access and read e-books in the same manner as traditional textbooks; readers tend to "dip" in and out of sections of the text and digest information in chunked out text (Nicholas et al., 2010; Christianson, M., 2005; Appleton, 2004). It is an easier transition for students to use an e-book like a textbook than for leisure reading. The challenge is not having the content available but linking faculty to these resources and encouraging them to share with students to help achieve learning goals. This is critical to note as a 2006 study conducted at the University of Denver by Michael Levine-Clark found that students were more aware of e-book resources when directed to e-books by a librarian or professor. However, Levine-

Clark (2006) found that "awareness of electronic book availability does not necessarily translate into use" (p. 291).

Given the post-2008 recession and student concerns about the costs of textbooks, leaders in higher education must be willing to adapt practices that meet the needs of students (Grensing-Pophal, 2008). One way to better serve students is to inventory all resources available to the institution and exhausting methods for delivering those resources at a minimal cost to students. In this process, electronic library resources should be a priority. Just as individual schools monitor academic program enrollment for budget decisions, libraries monitor usage statistics to make informed decisions about acquiring resources that best serve student learning. Because of this heightened scrutiny, effective evaluation of these resources must in terms of value for the student is crucial.

Higher education should strive to deliver contemporary learning experiences in the digital age. Buczynski (2006) states, "there is a gap between how higher education faculty plan to teach a course and the actual learning environment that exists in practice" (p. 169). This study explores how to address some of those gaps. By repurposing existing electronic library resources, students receive relevant and reliable course content in a digital environment while saving money.

DATA AND METHODOLOGY

Researchers conducted the experiment in three sections of Introduction to Marketing at a small private New England University during the fall 2010 semester. Students (N=87) were given the option to use the recommended traditional textbook, embedded links to the content located in the e-book database or a combination of both content sources. A pre-course survey was developed to assess previous e-book and e-book-related technology experiences. Eight (8) end-of-module surveys measured student format selection, and preference and satisfaction of course content sources. An end-of-course survey captured quantitative and qualitative feedback regarding the course. Participation was voluntary and faculty offered extra credit bonus points to incentivize student participation.

Authors developed surveys based on the review of literature to meet the objectives of this exploratory research project and utilized Qualtrics survey software to develop and distribute the surveys electronically via the course Blackboard site. Links to each survey were available to students via a course announcement at the end of each course module. Researchers collected and analyzed the data to report initial findings and recommendations for future research.

FINDINGS

Survey participants (N=87) were female (46%) and male (54%) undergraduate Introduction to Marketing students. The majority (86%) had never used an e-book prior to the course, however all ten respondents who had used e-books previously indicated having a favorable experience. Regarding familiarity with the Blackboard Learning Management system, 58% indicated previous experience.

Data analyzed included respondent adoption rates by course content option throughout the pilot study. The majority of students selected the e-book embedded links only option (Table 1). Throughout the course, response rates varied but an average over the term indicates that 50% of students selected the e-book embedded links only option, 28% traditional and e-book content combination, while 22% used only the traditional textbook. Though existing literature predicts adoption hesitation by students, these findings indicate students are open to e-book alternatives to traditional textbooks. This shift in student behavior indicates traditional-age undergraduate students are both comfortable with technology and navigating e-books as a primary course content source. Additional research is needed to analyze this observation in more depth in terms of specific variables that influence e-book adoption rates.

Table 1: Content Source Usage by Course Module

Module	Traditional Textbook Only	e-book Links Only	Traditional and e-book Content	Total
1	13 (23.6%)	22 (40%)	20 (36.4%)	55 (100%)
2	15 (26.3%)	20 (35.1%)	22 (38.6%)	57 (100%)
3	13 (22.8%)	32 (22.8%)	12 (21.1%)	57 (100%)
4	13 (18.3%)	37 (18.3%)	21 (29.6%)	71 (100%)
5	11 (18.6%)	37 (18.6%)	11 (18.6%)	59 (100%)
6	14 (23.7%)	32 (23.7%)	13 (22.0%)	59 (100%)
7	10 (27.8%)	16 (27.8%)	10 (27.8%)	36 (100%)
8	8 (17%)	26 (55.3%)	13 (27.7%)	47 (100%)

This table shows student course content selection by course module. The course includes eight modules.

A key research question for this study was to identify how content format might affect perceived content quality by students. A mean comparison indicated no significant difference between groups for perceived content quality by respondents (Table 2). Students relying on only the traditional textbook for their course content rated this option lower for quality than the two options that included the e-book option. These results indicate a need to identify the variables that inspire student motivation for engaging with course content sources. Previous research indicates students gravitate to content presented in small doses, or "chunks." Thus, the embedded e-book content was more appealing to students than the traditional textbook that includes lengthy chapters to be read linearly.

Table 2: Mean Comparison for Student Perceptions of Content Quality by Content Source

Content Source	Mean
E-book/Traditional Book Combination	5.66 (n=122)
E-book Embedded Links Only	5.62 (n=222)
Traditional Textbook Only	5.46 (n=97)

NOTE df = 2; F = 1.230; N=440; p. = .293 | Significance at p < 0.05. 7-point scale. Strongly Disagree = 1; Strongly Agree = 7

In addition to adoption rates and perceived quality, researchers also analyzed student perceptions of content format convenience. A mean comparison indicated no significant difference between groups by respondents who used the e-book embedded links only option (m=5.47) and traditional textbook-only option (m=5.16) (Table 3). Students using a combination of content sources indicated lower levels of perceived convenience. The context for convenience lies with the overall course design and formatting of the embedded e-book links into the learning management system, as well as the reliability of the technology used to deliver the content. Learning theory indicates that students achieve higher levels of learning with both quality content and accessible delivery of that content. Though not conclusive, this is an interesting insight into the adoption rate of students with regard to electronic/on-screen resources.

Table 3: Mean Comparison for Student Perceptions of Content Convenience by Content Source

Content Source	Mean
E-book Embedded Links Only	5.47 (n=222)
Traditional Textbook Only	5.16 (n=97)
E-book/Traditional Book Combination	3.76 (n=122)

Note df = 2; F = 2.339; N=440; p. = .098 | Significance at p < 0.05. 7-point scale. Strongly Disagree = 1; Strongly Agree = 7

Tracking usage statistics is critical for effective management of library funds allocated to purchase subscriptions to databases such as Books 24x7. The university library experienced dramatic growth in

Books 24x7 e-book usage since the inception of the pilot course in September 2010. A comparison was made (fall 2009 vs. fall 2010) from vendor-supplied user statistics (Table 4) and researchers documented significant increases in each key usage category between the two periods. Implications for academic libraries based on this finding are discussed in detail in the conclusion section of the paper.

Table 4: Comparing Books 24x7 Library Usage Statistics; Fall 2009 vs. Fall 2010

Usage	August 15, 2009 to December , 31 2009	August 15, 2010 to December , 31 2010
Active Session Minutes	17,548	33,471 (+239%)
Individual Users	66	191 (+102.7%)
New Users	57	161 (+90.7%)
Number of Pages Accessed	5,956	12,070 (+182%)
Total Sessions	879	2,980 (+189%)

This table outlines increases in all major Books 24x7 usage statistics for the same period of time in 2009, prior to the experiment and in 2010, the semester in which the experiment began.

CONCLUSION

The findings of this study reveal numerous reasons for leveraging and repurposing library resources (i.e. Books 24x7).Clearly, this option provides students the opportunity to utilize vetted textbook resources at no additional cost to them personally. High adoption rates dispelled initial concerns about students rejecting online e-book content delivery. Students who chose the e-book option found the content to be of equal or better quality and as or more convenient as the traditional textbook alternative.

When starting the project it was critical to ensure continual vendor support to address technical challenges that may influence reliable and efficient content delivery to students. This relationship helped maintain confidence in the product and resulted in increased use of the resource and overall awareness of library e-book resources. While libraries are not strangers to budget constraints, the present economic crisis has greatly affected the need for libraries to evaluate their materials budgets and slash subscriptions and resource lines when necessary (Hunter & Bruning, 2010; Weir, 2010). The university library looks to in-house and vendor supplied database and title usage statistics before each budget cycle in order to determine renewal priorities.

Yet, there are challenges to implementing the model introduced by this pilot course. Currently, collections included in the Books 24x7 database primarily support the business disciplines. However, there is great potential for numerous business programs to benefit from this library resource, colleagues in the areas of education and liberal arts do not yet have similar one-stop-shop resources. While the researchers are encouraged by student responses to the pilot course model, gathering data from additional sections of the course over additional terms is needed. Future research should explore utilizing other textbook alternatives such as open educational resources.

From an administrative perspective, because many institutions profit from on-campus book sales, conversations will have to continue on the balance between this revenue stream and providing relevant free content students that do not include traditional textbooks.

Designing and testing the embedded e-book links in the Blackboard Learning Management System took approximately two weeks. In addition to this preparation period, both faculty members actively gathered and analyzed data throughout the term and integrated student initiated suggestions to improve the course in each of the eight modules. This is in contrast to a traditional course that may offer students one opportunity for assessment at the end of the term. Both researchers throughout term put considerable

time and effort forth. It is worth noting that the current iteration of this pilot course requires considerably less time and supervision by both the teaching and library faculty participants.

So what is the potential for e-book databases and other open sources of content to replace traditional textbooks? Based on the quantitative and qualitative findings the researchers feel that there is a great potential for additional research in this area. Given the nature of the digital age, undergraduate students are more comfortable than ever accessing electronic content sources (i.e. e-books). Tools such as electronic library resources, Google Reader, Google News, RSS, learning management systems and others enable faculty in all disciplines to locate relevant content to support their courses, and to embed that content into meaningful learning modules for students.

The researchers believe textbook publishers still currently have a market to operate. Yet, this market is quickly changing due to economic, technological and competitive factors out of their direct control. Based on the conclusions of this experiment, additional questions present themselves specific to the learning environment that currently includes faculty, students, publishers, library resources and multiple open channels of relevant content. The authors are particularly interested in exploring whether alternative textbook resources can support an entire program (i.e. major, minor, certificate), and whether this model can be applied to additional business courses and in other disciplines. If so, can this model serve as a marketing competitive advantage for individual programs, schools or entire universities? It also remains to be seen whether individual faculty will take advantage of the influx of reliable open educational resources as an alternative to print textbooks and what role libraries and librarians have in accessing and promoting content to faculty that can potentially serve as these alternative resources.

Lessons Learned

Technology unleashes the potential for sharing quality relevant content outside the confines of a traditional textbook model. Alternative resources are available through current library subscriptions and freely on the web with the growth of the open educational resources movement. In contrast to various reports indicating that electronic content and readers for such content still trail in adoption by students to traditional print formats (Young, 2009; NACS, 2010; BISG, 2011), students embrace electronically delivered content when "dipping" in and out of embedded e-book links as previously found by the Nicholas et al. (2010) and Appleton (2005). This pilot course has found that students actually prefer the convenience of reading embedded e-book content to that of reading traditional textbooks linearly.

Another unexpected observation was students' acknowledgment of the value of using multiple textbooks to support a single course as well as the differences in author writing styles and examples used. This observation provided a unique teaching opportunity to discuss the importance of consulting various voices during the research process and the importance of evaluating one's sources. Students also noted that educational technology tools enable and encourage constant communication throughout a given term between students, teaching faculty and library faculty to improve course delivery and overall user experience. Having a library liaison embedded into each section of the Blackboard course site allows for constant monitoring of student questions or problems using the e-book links or e-book database. In addition, online surveys embedded in the Blackboard site captured student feedback regarding their satisfaction with e-book content, convenience and course layouts. This empowers the faculty to make real-time changes to the course and provide timely support to students.

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BIOGRAPHY

Dr. Andy Lynch is an Associate Professor of Marketing at Southern New Hampshire University. He can be contacted at School of Business, Southern New Hampshire University, 2500 North River Road, Manchester, New Hampshire, USA. Email: a.lynch@snhu.edu

Brooke Ratto is the Information Literacy Librarian at Southern New Hampshire University. She can be contacted at Shapiro Library, Southern New Hampshire University, 2500 North River Road, Manchester, New Hampshire, USA. Email: b.ratto@snhu.edu

BLENDED TEAMWORK: THE FACEBOOK EXPERIENCE

María Dolores Sánchez Fernández, University of A Coruña

ABSTRACT

The business world increasingly demands workers who can master new technologies to develop collaborative networking. Social networks are being used in business environments more and more, particularly the large incursion that Facebook currently has. Therefore different online tools, especially Facebook in combination with face-to-face meetings were used for to develop teamwork by students from the last year of the Bachelor of Business. The aim was to promote the development of practical work in a team of future workforce through the intensive use of new technologies to carry out work and communication between the different members of the group. The results obtained were far from the results expected. The students based their work on intensive face-to-face meetings carried out and telephone use to the detriment of new technologies, leading to a reluctance to using Facebook for collaborative work.

JEL: A22; I23; M15

KEYWORDS: Blended Teamwork, Facebook experience, collaborative networking

INTRODUCTION

Teamwork is one of the key skills demanded by companies, as well as knowledge of new technologies in the environment of collaborative networking. Different studies conducted by Spanish Universities' Occupational Observatories reflect this, showing the main skills that businesses demand from future graduates. To meet this demand from businesses, universities must act to provide students access to these skills in their training programs. It is necessary to be aware the European Higher Education Area and the Bologna Declaration have also included the acquisition of skills in the educational environment to be developed in organizations under their guidelines.

Furthermore we must note there are more and more Internet users that use social networks to contact friends, virtual acquaintances, colleagues, family, etc. This social interaction leads to people talking about various topics, including products and services offered by companies, that is, organizations in general. There is a large increase in users connected to different social networks which include various professionals as well as enterprises. One of the most widely used social networks now, for small, medium-sized and large enterprises is the social network Facebook. This social network enables networking of different users, group work, and free applications. It is not necessary to receive an invitation to sign up and it is possible to stipulate limits when contacting with other users. All these features lead to selecting the Facebook network to carry out group work. Because of the nature of the general studies at the University of A Coruña, work is carried out combining online tools and face-to-face meetings, referring to the latter as the usual way of developing group work. This research was carried out after an easier initial experiment Sánchez & Brenlla (2010).

This article is divided into different sections; the first section is a review of the literature about the issue addressed throughout the article. The following explains the method used for developing the questionnaire, the main research tool. Then we discuss the methodology which explains what the questionnaire is like, what population the study is for and sets out the theories. Immediately afterwards both the quantitative and qualitative empirical results from the open and closed questions on line questionnaire are described. In this final section the results are looked at in detail and conclusions are

drawn up, as well as future investigations. In the last three paragraphs, we express our gratitude to the reviewers because thanks to them this research has been brought to light and has also allowed me to improve in this research and future projects. Following this are the bibliographic references and finally the outline of the bibliography.

LITERATURE REVIEW

Educational innovation projects (IPPs) Dasi, and others (2007) identified key areas. These are student work potential, paying attention to competence objectives, coordinating with the group teaching staff, paying personalized attention to students and highlighting the use of new technologies in the classroom. Gonzalez & Wagenaar (2003) identified it as competition for the set of interrelated and interdependent factors. The first being knowledge (namely, the knowledge needed to perform an activity and / or to gain knowledge, ability to know and understand). The second is skills (knowing what to do, be it solving problems or performing a task, academic or not, competence). The third being attitude (knowing how to adapt, take part in and contribute to sustainable development of their environment). And the last is, values (knowing how to behave, assuming the values as part of the way of behaving, respecting others and living in a social and environmental context).

Perez and others (2003) believe that multimedia material is an excellent educational tool, highlighting among its properties flexibility and accessibility. Cano (1994) defines educational software as a set of computing resources designed to be used in the teaching-learning context. Perez, and others (2003) identified as main advantages the use of the resources mentioned by Cano.Among these is using material with a multimedia system increases student motivation. Software usually has many elements that are responsible for keeping the students' attention and interest and for many people the simple fact of working with computers has a playful connotation. The use of multiple channels to show information increases the effectiveness of the teaching-learning process. In addition, many of these programs often include self-assessment sections that offer the user feedback on their learning process.

Its flexibility allows self-guided learning and does need more than a computer and can be used at anytime, anywhere. Harasim and others. (2000) tells us that network learning is based on both overall interactivity and collaborative learning; it also includes access to educational resources and activities, not only at specific times, but throughout life identifying it as an emerging model. Castells (2001) identifies it as the Internet technical partner model, understood as the organizational form of our society's communication, not appearing as a single technology, forming the material basis of how we maintain relationships, work and communicate. Dillenbourg (1999) presents the learning process as a group of students engaged in a coordinated manner during a specific being able to solve a problem or perform an activity which can be considered collaborative.

They provide opportunities for collaboration, communication and production skills to work in teams using virtual environments (Harasim, Hiltz, Teles and Turoff, 2000). McClintock (2000) brings us new technologies, specifically telematic systems which are interesting ways of introducing alternative pedagogies and promoting changes in educational structures.In terms of digital skills covered in the Lisbon Strategy framework, the European Parliament and the European Union Council in 2005 include safe and critical technologies of the information society (IST) for work, leisure and communication. It builds on basic ICT skills: the use of computers to gather, evaluate, store, produce, present and exchange information and communicate and engage in collaborative networks by the Internet. Platforms have created license fees for collaborative work. In our case the application of Web 2.0 allows us to use free online tools, such as the social network Facebook, which is important because of the current economic crisis we are living and for developing teamwork.

A General and Methodological Approach towards Web Support Questionnaires

The tool selected to obtain information from the students and carry out diagnostic research is the questionnaire on the web. The free online tool belonging to the online software package provided by Google, Google docs, and spreadsheet software in the option "form" was used. As an online questionnaire it has advantages and disadvantages. Among the advantages identified as a tool questionnaire, the information provided is quantifiable, resulting in greater normalization and promoting standardization. As advantages for the respondents; they can choose the timing and location, as well as the option of filling in the survey or not. The disadvantage highlighted is the length of the survey. To make reading and answering easier it is divided into blocks, analyzing teamwork, the use of new technologies, demographic data, identification and assessment of the different types of tutoring used. The Web format does not imply a simple change of hardware, from paper to electronic, but the use of the advantages of the survey in web format. The questionnaire provides benefits for research staff. Data is sent directly to hardware provided by Google web docs, which avoids manipulation of personal data by intermediary staff.

This avoids mistakes as well as errors in data entry and the agility in which they can be converted into different formats for use by different statistical software for further study. Among the advantages identified in research by Díaz García (2008) are; minimum cost, quality, immediacy, interactivity, representation and automatic data processing. One of the ways identified to improve the use of the online questionnaire therefore increasing the response rate is the use of incentives (Bauman and others., 2000, Cook and others., 2000, Frick and others., 2001; O O'Neil and Penrod, 2001; Downes-Le Guin and others., 2002; Bosnjak and Tuten, 2003, Porter and Whitcomb, 2003; Birnholtz and others., 2004; Tuten and others., 2004; Göritz, 2005; Göritz, 2006; Heerwegh, 2006) and personalizing invitations (Joinson, 1999; Cho and LaRose, 1999; and Reips Musch, 2000; Heerwegh and Loosveldt, 2002, Kelly and McKenzie, 2002; Porter and Whitcomb, 2003; Heerwegh and Loosveldt, 2003; Heerwegh, 2005). Students are encouraged to fill in the questionnaire by offering them a higher mark in their diploma thanking them for their participation and not provoking negative comments. They are also informed that they are contributing to improving the subject and group work for future courses. The use of incentives increases participation and shows the tendency to reduce the number of incomplete responses (Bauman and others, 2000; Musch and Reips, 2000, Frick and others., 2001; Downes-Le Guin and others., 2002, O'Neil and others., 2003; Bosnjak and Tuten, 2003; Tuten and others., 2004; Deutskens and others., 2004;2006; Heerwegh, 2006; Göritz, 2006) which justifies their frequent use.

The first survey and test survey took place during the first quarter following completion of the first part of the work carried out in the group using a nonelectronic format. The second survey shows the work carried out during the second quarter in electronic format showing the members of different teams for assessment.

DATA AND METHODOLOGY

Methodology

The research corresponds to the methodology in the nonexperimental mode survey for the following reasons (Cohen and Manion, 1990, McMillan and Schumacher, 2005; Torrado, 2004). We chose to collect information on the variables of interest through an on-line questionnaire, created by Google Docs online tool option form.The surveys collect data at a specific time for various purposes: descriptive, rational and for explanation. In this case a survey form to be filled in within 5 days was uploaded after the deadline for handing in work. As an incentive we gave a slight increase in marks for filling in the form, letting them know that their participation is valued and that their comments will not be reflected in it, apart from asking for their honest opinion.

The survey method is frequently used in research in education. In our case it gave us an idea of the perception of the usefulness that new technologies have in combination with face-to-face meetings. Whether it has favored teamwork or improved the effectiveness of interaction within group members by improving the quality of the work they do. And if the time needed to perform tasks assigned is reduced and the analysis of the usefulness of the work carried out by students.

Features of the Questionnaire

The instrument used in the survey has been developed as a source of information. The first survey was conducted testing the first quarter before the end of the work carried out during the year. In this first survey we obtained the first results of work completed in the period from October to February 2010. It had to be filled in during the first term exam, once the deadline for the first part of the group work had finished. In this first survey the delivery procedure of the proposed work was analyzed in the first phase of the project. It consisted of 70 items using the Likert scale of 1 to 5, where 1 was the lowest score and 5 the highest. A second survey was conducted to obtain the data for the second phase of the project that we are presenting in this study. The latter was formed by 86 items using the Likert scale of 1 to 5, where 1 was the lowest score and 5 the highest. We included 5 opinion questions about the advantages and disadvantages of the tools used and a space to express whatever they wished and had not been asked before. The need for carrying out surveys is based on the analysis of the advantages and disadvantages noticed by learners to develop their teamwork and its progress using ICT as support. The experiment rating as well as the improvement proposals recommended by students should be included.

Population and Study Sample

Table 1 schematically represents the demographics of the study sample.

Table 1: Demographic Information from the Study Sample

N	**157**	
Gender	Men	62%
	Women	38%
Quantity of work groups	13	
Connection with the labour market	Reconciling work and studies	29%
	Not reconciling work and studies	72%
Age (average)	24	

The population is made up of the subgroup of 157 students tutored by the Organization and Management of Companies teacher. The students belong to the third year of the Business Studies Diploma which is divided into 13 groups that include 12 or 13 members each during the second quarter of the academic year 2009-2010. The entire study sample carried out practical work using Facebook as a condition for group work. As for gender, 62% of the sample is women and 38% men.

As we are dealing with the final year of the diploma, the variable related to working and studying simultaneously has been introduced. 29% of students taking the course and carrying out practical work both work and study at the same time, while 72% dedicate all their time to studying.

Procedure

The approach is because of the characteristics of the design called basic correlation, since they are not intentionally manipulated variables, using SPSS (version 15.0). The main analysis technique used was: Pearson correlation for the analysis of interactions between variables. Open questions have been subdivided according to the views expressed by students. They stated the main advantage of working with the Facebook tool to develop teamwork and its main drawback.

Hypothesis

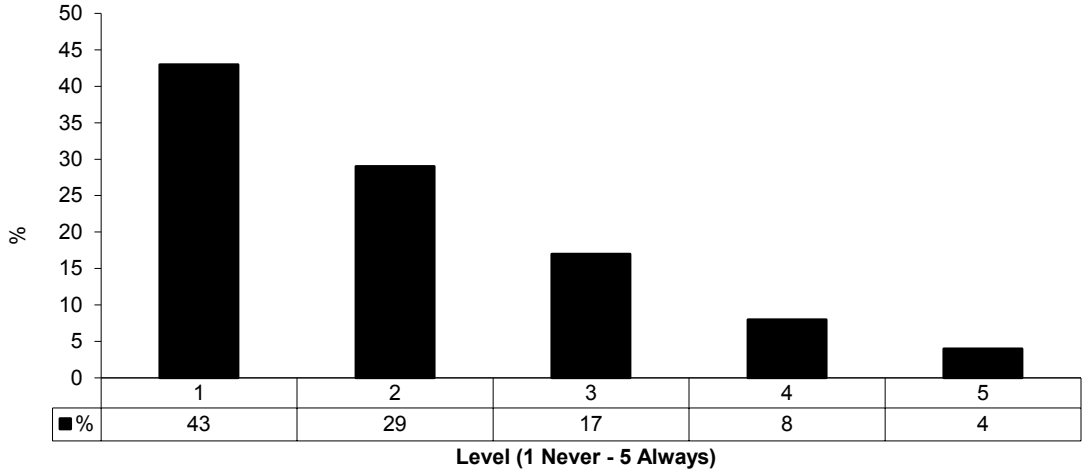
The general hypothesis is the following: using the blended approach, teamwork has a positive influence on carrying out teamwork. This is based on the assumptions set out below: The more you use the blended methodology, the shorter the time needed to perform assigned work tasks. The more you use the most useful blended approach, the more obvious it is in the work. The more you use the highest quality blended methodology, the higher quality work you achieve. The more effectively you use the blended methodology, the more effectiveness it has on group interaction**.** The more experience you have using ICTs, the less time needed to perform assigned work tasks. The more experience you have in using ICT the more effectiveness it has on group interaction. The more experience you have using ICT's, the more it favors teamwork.

EMPIRICAL RESULTS

Set out below are the first results that we see in the analysis of the use of the virtual tool Facebook. Below we show the results of the closed questions put forward in the survey.

Figure 1 shows to what degree students have used new technologies in previous courses. Level 1 shows that they have never used any and level 5 shows that they have always used new technologies. We must consider that they could choose intermediate levels of response.

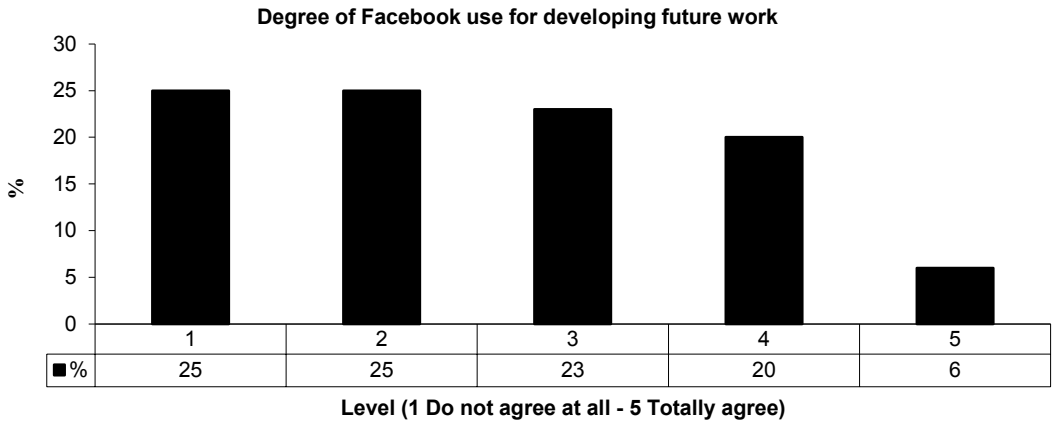
Figure 1: Extent of Use of ICTs in Previous Years



In the experiment of using new technologies carrying out work in virtual groups to carry out the work requested in class before this course, 43% said they had never used new technologies to work in virtual groups. 29% had used almost all the new technologies for developing the virtual work requested. 17% were in a middle area. 8% had sometimes used new technologies to carry out class work and only 3% stated that they had always used new technologies when carrying out their work.

Figure 2 displays the results in which students expressed their intention of using the online social network Facebook in the future. The responses are graded in levels, a student who selects level 1, the lowest level, states that they do not agree with the statement, which is they will not use Facebook in the future. Level 5 is the highest level; these are students who agree with using Facebook to carry out future work. Students can choose intermediate levels of response in the range 1 to 5.

Figure 2: Degree of Facebook Use for Carrying out Future Work.

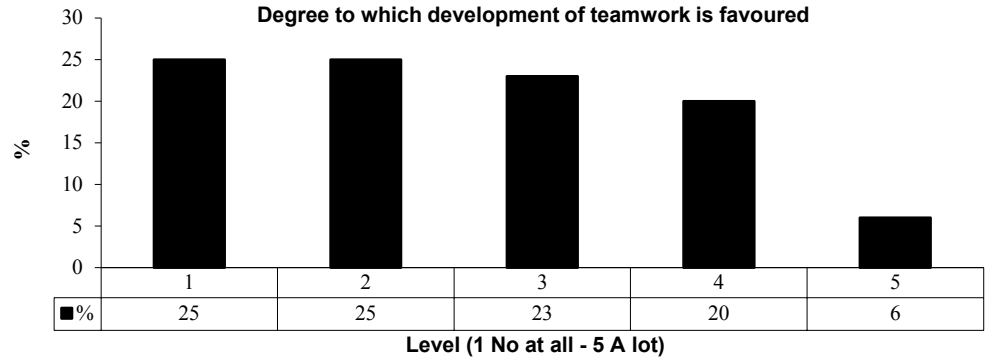


Twenty five say that they will not use this tool for future work because they strongly disagree with the use of Facebook for teamwork. Another 25% state they disagree with the use of Facebook for carrying out teamwork. 23% are in an intermediate range agreeing and disagreeing on carrying out tasks through Facebook. 20% responded positively stating that they agree on the future use of Facebook in carrying out teamwork. 6% of students are in full agreement on the use of Facebook for carrying out teamwork in the future. Therefore, 50% of students are reluctant to use Facebook for carrying out teamwork in the future compared with 26% who show a positive intention of using it and leaving 23% in a middle ground between using and not using Facebook.

The following is the analysis of the use of online tools for virtual work (Facebook, email, website) and combining face-to-face meetings with questions. These questions are related to the usefulness and effectiveness of group member interactions. Whether it has improved the quality of the work carried out, if the time needed to perform tasks assigned to students has lessened and finally students' perception of the usefulness of the work carried out.

Figure 3 presents the analysis of teamwork carried out and whether it has favored the use of the blended method approach in carrying out group work. It is possible to choose between levels 1 to 5 in the responses, 1 being the lowest level not helping at all and 5 the highest level helping a lot, but you can select intermediate levels.

Figure 3: Degree to Which Carrying out Teamwork is Favored. Blended Methodology

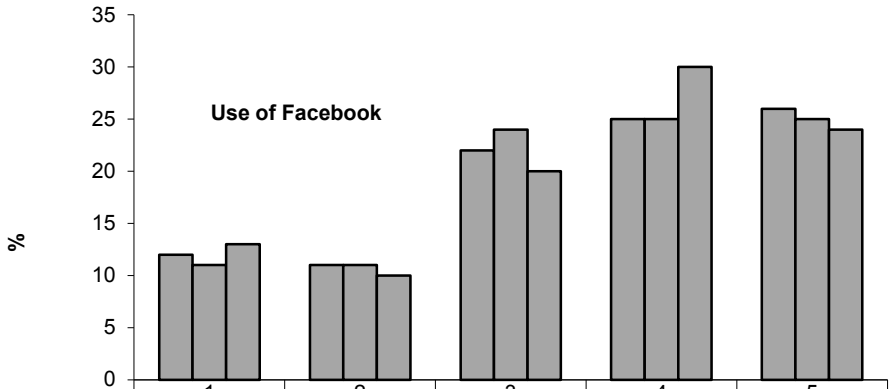


On the related issue of whether the use of online tools for virtual work (Facebook, email, website) and combining face-to-face meetings has favored carrying out teamwork: 5% stated that it has not helped teamwork in any way. 15% representing a negative view in which it has not helped carrying out teamwork at all. 28% state the combination of online tools used for teamwork has had little effect. 39% state the use of online tools and face-to-face meetings has helped them in someway and 12% state that carrying out teamwork through a combination of virtual work using online tools in combination with meetings has helped them a lot.

In response to the question of whether learning to use Facebook has been easy for me, 18% do not agree with this statement. 11% agreed to a certain extent that learning to use Facebook has been easy. 24% are in an intermediate range. 25% agree that it has been easy to learn how to use Facebook and another 25% strongly agree that it has been easy to learn how to use Facebook when carrying out teamwork. 50% express ease of use, 24% are in a middle range, and only 22% do not consider Facebook easy to use.

In Figure 4 we analyze the ease, clarity and accessibility in using the social network Facebook when carrying out teamwork. Students state their opinion by giving values from level 1, showing that they do not agree, up to level 5, which shows complete agreement. It is possible to choose mid-level responses.

Figure 4: Use of Facebook



	1	2	3	4	5
Degree of clarity and ease when using facebook	12	11	22	25	26
Degree of ease handling facebook	11	11	24	25	25
Degree of global accesibility of facebook	13	10	20	30	24

The students mainly identify with response levels 3 to 5, that is, from the intermediate level to the maximum level where students strongly agree. Between 73% and 74% of the students consider the online tool Facebook to be easy and accessible. At the other extreme are students who identify with the response levels 1 and 2, being 26% and 27% of the students, stating the social network Facebook is not so easy, clear or accessible.

In the statement that Facebook is clear and easy for me to understand. 12% say they totally disagree, 11% disagree, 22% being in the middle ground. 25% agree the social network Facebook is clear and easy for students to understand. The highest percentage being 26% who strongly agree the social network Facebook is clear and easy to understand. 51% of students stated it is easy for students to understand the Facebook tool, while a negative 23% do not find it easy and clear to understand.

In the statement that claims that learning to use Facebook has been easy for students, 11% say they disagree. 11% agree with the statement to a certain extent, and 24% are in the middle ground. 25% of students agree a little more that the use of Facebook is simple. The other 25% represents those who are in full agreement with the easiness of learning how to use Facebook. 50%, which is a high percentage, stated it was easy to learn to use the online business tool Facebook. 24% are in an intermediate section. 22% do not agree with the statement that it was easy to learn to use Facebook as a teamwork tool. 13% of students generally consider Facebook as being possible to use but do not agree at all that it is generally considered possible to use. 10% did not consider Facebook as being usable. 20% are in the middle ground. 30%, still representing the highest percentage, overall agreed it is possible to use Facebook. 24% strongly agree that it is possible to use Facebook globally. The representative percentage, 54%, says they positively believe it is possible to use Facebook.

Correlations

In Table 2 below we can only see the selection of the main correlations that come up positively among the different items.

Table 2: Main Correlation amongst Items

Positive correlations			
Related items			
Age	Works and studies	r=0,230	p<0,01
Age	Teamwork	r=0,191	p<0,05
Gender	Clear and easy	r=0,160	p=0,05
Gender	Previous use of Facebook	r=0,330	p=0,00
Time decrease	Quality	r=0,618	p=0,00
Time decrease	Effectiveness	r=0,568	p=0,00
Time decrease	Carrying out teamwork	r=0,564	p=0,00
Use of Facebook	Quality	r=0,246	p<0,01
Effectiveness	Group work	r=0,790	p=0,00
Effectiveness	Means	r=0,336	p=0,00
Effectiveness	Communication	r=0,336	p=0,00
Interactions	Simple	r=0,703	p=0,00
Interactions	Useful	r=0,817	p=0,00
Clear and easy interactions	Simple instrument	r=0,906	p=0,00

The highest correlations are those related to the interactions of the online tool Facebook and simplicity and clarity. Those that correlate to a lesser extent are related to age and teamwork as well as age and if you work while studying. Other popular items most correlated with others related to the team and work, not the tool itself, are the effectiveness and time decrease.

We can see the following results when calculating the correlations of the closed questions:Age correlated positively with the work, which is obvious, we assume the older they are the more likely they are to study and work ($r = 0.230$, $p < 0.01$). Gender correlates with having previously worked using Facebook, that is, being a woman means it being more likely ($r = 0.330$, $p = 0.00$). The fact they consider lessening the time needed to perform assigned tasks correlates positively with believing that quality improves ($r = 0.618$, $p = 0.00$) and work effectiveness (($r = 0.568$, $p = 0.00$) and favors work completion ($r = 0.564$, $p = 0.00$). The fact they believe that it improves the quality of work also correlates with the fact that those who have used Facebook believe it improves their work significantly ($r = 0.246$, $p < 0.01$). Those who believed that it improves the effectiveness of their interactions with the rest of the group positively correlated it with helping group work ($r = 0.790$, $p = 0.00$). They also think it is a suitable way to work in teams ($r = 0.396$, $p = 0.00$) and for communicating among group members ($r = 0.336$, $p = 0.00$). Those who believe that their interactions with Facebook virtual work has been effective relates directly to believing the interactions are simple to carry out ($r = 0.703$, $p = 0.00$) and useful ($r = 0.817$, $p = 0.00$). Women more than men believe that is a clear and easy to use means ($r = 0.160$, $p = 0.05$). The higher the age, the greater the belief that this system encourages teamwork ($r = 0.191$, $p < 0.05$). The fact the interaction created by virtual work is clear and easy, correlates positively with believing that learning to use the instrument was simple ($r = 0.906$, $p = 0.00$).

Advantages and Disadvantages of Using Facebook Tool When Carrying Out Teamwork

Here we present the comments made by students about the open questions when identifying the main advantage and disadvantage in carrying out teamwork using the Facebook tool. In the open question about identifying the biggest drawback in using the Facebook network when carrying out teamwork run by the students, we can find the following types of responses:

First, the biggest problem that occurs when working is uploading the files needed. Unless they are video files or photos of the group working, it does not allow you to upload other types of extensions needed to share with other group members. Second is the inexperience and little flexibility in the use of new technologies such as developing a file attachment. And the disadvantage resulting from this link often resulted in error messages. These first steps involve great loss of time when it comes to carrying out work with the need to share files that do not allow direct uploading of files with the available online tool to create Facebook groups.

Another problem raised by the students arises from the habit of not using the social network Facebook, therefore, not looking regularly at the work group messages and in particular the social network Facebook. This means that what at first we could consider a means in which much communication among the group could take place, becomes a barrier because of not using new technologies in general. Not everybody may have had a Facebook account before carrying out practice work and this means the lack of continual use hinders student interaction among team members. This last problem we identified arises mainly from pupil ignorance, not knowing how to link Facebook working group messages to the working group e-mail, although many of them have and do use the e-mail as a means of communication. Even when they have this tool available, the slackness in reviewing it shown by members of the working groups of students is remarkable.10 of the 13 groups formed to carry out the work as a team express the complexity of using the wall for communication and discussion. Among the disadvantages expressed is the lack of order in the messages, an unorganized comments exposition and difficulty interacting when carrying out a debate. It is necessary to highlight that doing extra practice on the Facebook discussion group was proposed to all the students belonging to the group.

Not all groups used this section, using the forum that might have been used to develop the work. Only two of the discussion groups created debates in this section. Among the advantages cited by the groups using this application, we can see it is possible to discuss all the issues separately and in an orderly way using the wall for messages which we might call current and communication. In particular these two groups used the wall for general asynchronous group communications in contrast to the points of discussion in the forum, also using asynchronous communication, but on specific topics to be discussed by the group. Therefore, the first disadvantages framed in 10 of the 13 groups that did not use the forums section could have been avoided with the benefits the other two groups showed when it came to the usefulness, ease and order. Among the students surveyed, the disadvantages of using Facebook for carrying out work are as follows: the complexity of understanding Facebook, its use and the lack of habit using it in this environment as with any other network environment. Mainly the students who had problems using Facebook were those who do not use Facebook, that do not have accounts and do not use it often or simply created the account but did not use it.

Other students more reluctant to use Facebook are those who use other social networks and show reluctance to using any other than the one they usually use. It is worth pointing out that students used two social networks; Facebook for specific communication and other social networks for regular communication even though the two networks did not allow them to share files. To do so they had to use different online tools to share the work in text format documents. Other statements made by students are that they do not like using it because it seems a personal environment and leads to distraction. They are

able to talk to their friends, play, see advertising which they considered anything but a suitable working environment and this also leads to distractions.

A small percentage of students state the environment created on the social network Facebook is not productive and is inappropriate for carrying out any work on an educational or business level. The lowest percentage is represented by those who state they totally oppose carrying out work and the use of the social network Facebook. 1.27% is worried about the distrust related to privacy. 20% stated in their answers that they do not have any objections to using Facebook for carrying out work.

The main problems that arise when carrying out work on Facebook are because of the lack of habit of using new technologies. The problem of the speed at which work is carried out arises before the lack of use of ICT tools in general. The following are the responses found in the open questions about identifying the biggest advantage of using Facebook when carrying out student teamwork. They highlight communication, usefulness, speed and positive contact. Within the communication environment they highlight the ease of communication between different group members as they use the same social network in which they can write messages sent directly to their email.

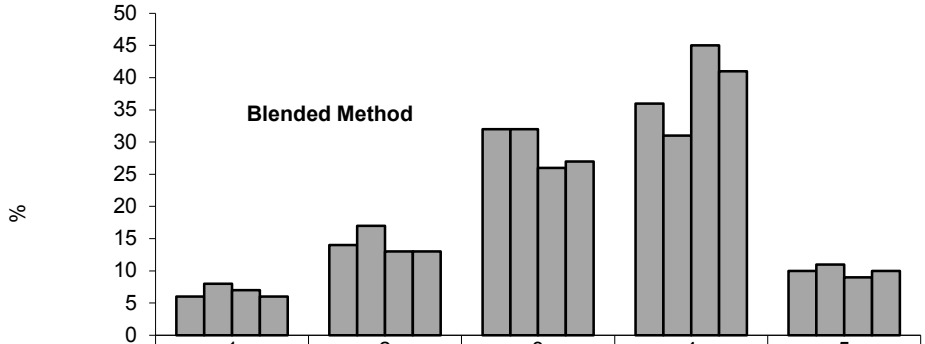
Another advantage highlighted is the use of asynchronous communication. This simplifies communication at different times from different locations where temporary classroom space is no longer a problem. Providing an environment of total integration lessens the need for face-to-face meetings, as some of the topics that need discussing appear in this way. The tool used for communication among students in the social network Facebook is the chat room where they are able to take part in discussions. As for asynchronous communication, they have used the following available tools: the discussion forums, wall messages to make comments and raise debates and messages sent through Facebook to communicate with all members. It allows asynchronous discussion in the spaces created for it by allowing better communication and orderly participation of the team members.

Facebook allows decision making without the need for face-to-face meetings saving time and simplifying interaction with other members without the need for simultaneous and face-to-face meetings. Another of the advantages of using Facebook as a tool for group work is the access to information, which means that this information is accessible to all group members. Regular use of the network for personal and leisure reasons helps knowledge, understanding and use of the tool for group work. Students who already had an account on Facebook showed ease and quick understanding of the use of group work. Those students who have accounts in other social networks showed ease when using and understanding group. But they made negative comments about the difficulty in using Facebook for those students who do not have accounts on any network or on Facebook. It is necessary to highlight that the students who use social networks stated that speed, timesaving and convenience are advantages of using these networks. This is in contrast to those who did not use or simply did not have an account on any social network. 23.56% state that using Facebook for carrying out teamwork has no advantages.

RESULTS

Figure 5 shows the results of students' opinions when evaluating the use of the blended methodology and the use of different online tools combined with face-to-face meetings. Usefulness, timesaving, quality of work and effectiveness using this methodology when carrying out teamwork were evaluated. The responses were rated from 1 to 5, 1 being the lowest level, meaning not at all and 5 being the highest, meaning a lot. It was possible select intermediate levels.

Figure 5: Blended Method



	1	2	3	4	5
Degree of utility	6	14	32	36	10
Degree of time saving	8	17	32	31	11
Degree of quality of work	7	13	26	45	9
Degree of perception of effectiveness	6	13	27	41	10

Level (1 Not at all - 5 A lot)

Most of the students surveyed identified with intermediate response levels 3 and 4. They tended to believe the use of the blended methodology gives greater usefulness to the work carried out, saves time in its preparation and increases the quality of work. Finally, we can see the students believe that using this methodology increases the usefulness of the work.

Degree of usefulness. 6% of students, who use online tools to work in virtual teams using the social network Facebook, email, training platform Moodle and face-to-face meetings, believe they are not useful for the work carried out. 22 people, who represent 14%, responded that it helped them a little. In the middle ground are the responses of 51 students, representing 32% that consider it useful for the work carried out. Therefore, 20% of the responses provided by the students are at the lower range, 32% in the intermediate and 46% in the upper range. 16 people surveyed say they strongly agree that using a combination of online tools and face-to-face meetings is very useful.

The use of the social network Facebook, email, the Moodle learning platform and face-to-to face meetings is to carry out virtual work. 46% of respondents, representing 73 students found it useful for their work. At the highest Likert rating (4) there are 16 people, representing 16%. 57 respondents, representing 36% of the higher range consider it useful for their work.In the statement for the use of new technologies in combination with face-to-face meetings for carrying out work, 51 students, representing 32% are in the intermediate range. At the lower end are 6% comprised of 10 students surveyed, in which students consider both techniques of no use. Almost no use of this combination of tools is identified by 22 students accounting for 14% of students under study.

Degree of timesaving Blended methodology. The next item is related to the time it takes the student to perform the tasks assigned to team members. 13 students representing 8%, state that the use of online tools, software groups in the social network Facebook, email and training platform web, Moodle, in combination with face-to-face meetings does not lessen time at all. 27students, representing 17% agree that a combination of online tools and meetings reduces some time. In the middle range is the largest number of students, 51 students, representing 32% of the total. It is closely followed by the 48 students representing 31% who consider the time of work execution greatly reduced using online tools in combination with meetings. 18 students representing 11% of the total said the use of the social network Facebook, email and Moodle training platform in combination with meetings greatly lessens the time needed to perform tasks.

Level of quality of work. 54% of students surveyed in the top range agreed that their quality of work had improved. 14 students, representing 9% expressed the view the quality of the work had improved a lot. The largest percentage of respondents in level 4 of the Likert scale is the students showing that combining online tools and classroom work greatly improves the quality of teamwork. 41 students representing 26% are in the intermediate range, stating the quality of work improves. 7% stating the quality of their work did not improve at all and 13% stating the quality improves slightly by using on line tools and techniques combined with face-to-face meetings.

Level of perception of effectiveness. Here we study the effectiveness of interaction with group members using online tools, e-mail selected by the students, the social network Facebook selected by the faculty and the use of the official platform of education of UDC in combination with meetings. 41% of respondents with a level 4 on the Likert scale stated a positive effect. 27% are in the intermediate range. 13% representing a level 2 on the Likert scale, find combining the use of online tools and face-on interaction with other team members an ineffective implementation. 10% of students expressed that combining virtual tools, Facebook, e-mail and the Moodle platform in combination with open meetings conducted by the team members improved effectiveness of interaction with other group members. The last position is represented by 6% of those students who state that these tools and techniques do not represent any effectiveness of interaction with other members of the group when carrying out teamwork.

The last item refers to whether the students felt that combining open meetings and the use of the different virtual tools positively promoted teamwork. The lowest percentage, 5% representing 8 students stated that it did not promote teamwork in any way. In second place is 12% stating that it has greatly promoted teamwork. This is followed closely by 15% of students who stated that carrying out the work led to little teamwork when combining online tools and open meetings. 28% of students in the middle range stated that online tools combined with face-to-face meetings have favored teamwork. A higher percentage, 39% of the students expressed the opinion that teamwork has been greatly favored when using different online tools for asynchronous communication.

Below are the data and relevant comments made after analysis with the SPSS statistical tool in which we obtain the Pearson correlation coefficients. First, I must say the figures are mostly positive and significant. They are from the student survey responses from the third year students of the Diploma in Business Studies enrolled on the subject of Business Organization. The exception of the figures is noted in the item related to the question, if the student had worked using new technologies in previous courses to carry out practical work. There is a significant correlation with the results obtained to the response regarding the use of online tools and open meetings in which students perceived greater value on the work they carried out. The Pearson correlation index assumes a value of 0.171 (*). Second we can find the Pearson correlation index 0.203 (*), a significant and positive correlation related to the students' view for carrying out practical work. It is conducive to say that using a combination of tools favors teamwork. Third, taking a Pearson correlation value of 0.209 (**) is the effectiveness of group interaction and the results obtained by using the same combination of online tools and open meetings. The fourth place has a most significant correlation using the online tool, social network Facebook showing a value of 0.427 (**).

Note that all Pearson correlation coefficients are positive and significant except for the item that identifies the questions about experience in using online tools in carrying out previous course work and the relationship with the social network Facebook. Below are the Pearson correlations referring to opinions on the use of the online tool used to carry out practical work by students surveyed. The most significant correlation which has a value of 346 (**), is presented by the reduced time needed to perform the tasks assigned to them. Second, the Pearson correlation value 0.336 (**) corresponds to the use of different techniques, online tools and open meetings for teamwork through the Facebook social network contributing to promoting teamwork. In third place is the perception of improving the effectiveness of students' interactions with their teammates, the correlation index of Pearson acquires a value of 0.331

(**). The fourth place has a Pearson correlation value of 0.325 (**) relating to the students' perception of the usefulness of the work carried out. With a value of 0.246 (**) and occupying the fifth place is improving the work carried out using a combination of online tools, face-to-face meetings and the Facebook social network as an online support for practical work.

The results obtained by the students, the use of Facebook as support for group work along with students´ views of improving the quality of their work, group interaction and work, the usefulness of the work carried out and the reduced time taken to perform the tasks assigned has shown a significant and positive correlation when using a combination of online tools and open meetings. In contrast the item related to the experience in the use of new technologies in previous years is not a significant aspect to highlight. The Pearson correlation coefficient takes a negative value of -0.109 and a positive but insignificant value related to the social network Facebook 0.026.

CONCLUSION

The proposed hypotheses are adhered to, but you can make statements as to whether or not they are adhered to fully. This is because the data does not reflect any significance in relation to the previous experience of students. Therefore this approach cannot be confirmed. We realize that the proportion of students who state that they have used new technologies in previous courses is not very high. We can suggest that it is not a representative sample to contrast the hypothesis. Therefore it does not show significant correlation. We cannot say whether the more experience the students have using ICTs in previous courses, the shorter the time needed to perform assigned work tasks and the more effectiveness in the interaction of the group. We cannot affirm or deny that it favors teamwork.

If you set a strong and significant correlation with the assumptions made about the use of the blended approach, combining face-to-face meetings with the use of various online tools, the data shows the more you use the blended methodology, the less time needed to invest to complete the work assigned. It also gives more value to the work carried out by the team. The more you use the blended methodology, the higher the quality of work completed. The last hypothesis that we raised through more intensive use of the methodology is that interaction between group members is more effective.

Other data which is reflected is the willingness of students to use ICTs, which has not been considered. This situation has been assumed but should be considered in future studies. The degree of knowledge has also been assumed given the age of the students but has not been reflected in these demonstrations. This should also be looked at in future studies.The reluctance to use certain technological tools such as Facebook, has not been considered. This could be one of the reasons why the perception of different hypotheses could have a negative influence. It is recommended future studies check this as it can be significant in influencing different factors.Generically speaking we can say that using the blended approach has a positive influence on teamwork, taking into account the considerations previously expressed, which should be included in future studies.

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BIOGRAPHY

Professor Maria Dolores Sanchez Fernandez can be contacted at: Faculty of Economics and Business, Department of Economic Analysis and Business Administration in the area of Organization and Business Administration, University of A Coruña. Elviña Campus, 2 nd floor in the "hall of Applied Economics II work." 15071, A Coruña, Galicia, Spain. Email: msanchezf@udc.es. Telephone 0034 981167000 ext. 2592.

IFRS READINESS IN LATIN AMERICAN BUSINESS CURRICULA

Myrna R. Berríos, University of Turabo

ABSTRACT

Multinational companies doing business in Latin America, and elsewhere in the world, must comply with individual countries' financial reporting and financial market rules and local legislation when disclosing financial information. This research assesses international financial reporting standards (IFRS) readiness in the finance, accounting, and taxation curricula in Latin American universities.

JEL: M4; I2

KEYWORDS*:* international financial reporting standards, business curricula, Latin America

INTRODUCTION

The issue to be addressed in this paper is whether or not Latin America's business curricula are ready to provide students the necessary international financial reporting standards (IFRS) knowledge to be successful either as financial report or tax return preparers or advisors or as users of financial information for making judgments and decisions. These judgments and decisions should consider financial market rules for companies to seek investment and financing opportunities and rights and duties under individual country's laws applying to such markets. According to March 2010 statistics of IFRS requirements for 172 country jurisdictions, 120 of them either require or allow IFRS for local companies listed in their stock exchanges (Deloitte Touche Tohmatsu, 2010). Munter and Reckers (2009) report the results of a survey of United States' participants, in which 22% intended to significantly incorporate IFRS into the curriculum during 2008-2009 and 33% planned to do so in 2009-2010. As more countries accept and implement plans for convergence to or adoption of IFRS, it is increasingly important for students of accounting, finance, and taxation to become more knowledgeable about IFRS.

The objective of this paper is to assess IFRS readiness in Latin American business curricula, compared to that of the United States and Canada. The data was obtained from course descriptions found on websites of a sample of universities listed on the Webometrics Ranking of World Universities. The IFRS readiness measure was the estimate of the proportion of accounting courses that include the discussion of IFRS as part of their description, for universities located in the Latin America region. Statistically significant proportion estimates were compared with subsamples from the United States and Canada region to analyze if there were significant differences in IFRS readiness in Latin America curricula when compared to those of the United States and Canada region.

Curricula must enable students to be knowledgeable with possible explanations for differences in accounting practices accepted in countries other than their own. These explanations include cultural, economic, legal, and economic factors, among others. IFRS readiness has important implications over the before mentioned disciplines for the successful application and usefulness of a set of high quality, global accounting standards. Finance professionals must understand how IFRS may impact the content, quality, and relevance of accounting information. This information is important in making judgments and decisions concerning the cost of raising capital in worldwide markets and the decision of whether to invest in international securities and/or acquire foreign firms or expand into new markets. The use of IFRS also affects the results of investment portfolio evaluation and performance indicators and metrics.

IFRS also has implications for tax practice. It affects tax planning and tax compliance, including documentation requirements. This is due to tax issues that may arise because of optimal foreign investment opportunities and financing choices under the implementation of IFRS principles.

While there is increased awareness of the challenges faced by the accounting profession's evolution towards global standards, this in and of itself does not guarantee that curricula reflect this trend. It is important that this be achieved to meet the goal of consistent interpretation and application of accounting standards to reflect economic events of the same nature in a similar, consistent manner to ensure comparability among financial statements of multinational companies. These interpretations will be increasingly more judgment based, which will impact accounting and business practices of these firms.

Businesses' continued access to global capital markets will not be possible if they do not prepare financial reports that are compliant with IFRS (Thomas, 2009). According to Alfaro and Hammel (2006), Latin American multinationals have achieved higher growth and lower financing costs by investing in host Latin American countries other than their home country. Consequently, business curricula must expose students to IFRS. This exposure can occur through infusion, new course development, and partnerships with foreign institutions (LeBlanc, 2007). Larson and Brady (2009), Charkey (2006), and Davidson and Francisco (2009) propose ways to add international content and issues to accounting courses. Website resources and study and work abroad projects are examples of alternatives for increased awareness about opportunities and challenges in doing business abroad and their implications over accounting education (Larson & Brady, 2009). In order for these firms to be adequately prepared, they must find ways to recruit and train their personnel at the lower costs possible. If curricula in business schools move in the direction of more awareness and readiness for a global mindset, it will become easier for multinationals to obtain the better prepared personnel for working with IFRS. This mindset leads to business process improvements, cost reductions, better budgeting and forecasting and improved business governance.

Professionals that may need to acquire IFRS knowledge to improve their job performance include budget analysts (Fabiszak, Feinberg, Jurek, & Sarkissian, 2009), tax professionals (McGowan & Wertheimer, 2009), bankers, audit committee members, and investors (Gannon & Wagner, 2008; Bukics, Masler, & Speer, 2009). However, it is not enough to develop alternatives for IFRS integration to accounting curricula and business professionals' need for IFRS knowledge. It is also necessary to assess the usage and effectiveness of these alternatives on actual curricula for students and training for professionals. This research is an attempt to fill the gap about the assessment of business curricula as it relates to courses taken by business students, with emphasis on the Latin American region. For these purposes, two measures, IFRS Readiness and Global Perspectives, not observed in previous literature, were created.

The paper is organized as follows. A literature review about the integration of IFRS to business curricula is presented next. The literature review is followed by a description of the methodology, including the topics of sample selection, IFRS readiness measure, and statistical tests. The next to last section discusses and analyzes the results. The last one presents the conclusions.

LITERATURE REVIEW

This section discusses the dilemma faced by Latin American multinational companies regarding international financial reporting standards (IFRS) and Latin America's opportunities and companies' alignment of objectives and practices to IFRS. The worldwide acceptance of IFRS is evident from the fact that 100 countries allow or require its use. As for its effect over multinational companies, at least 15,000 companies in these countries adopted IFRS, including foreign subsidiaries of most Fortune 500 companies. Multinational companies will be unable to have access to global capital markets if they are not compliant with IFRS (Thomas, 2009).

However, full adoption of IFRS is unlikely and efforts to converge, or make local accounting principles more similar to IFRS, are under way. This poses the challenge for multinationals to improve their accounting systems in order to measure, process and communicate information under both – local accounting principles and IFRS. If and when local standards cease to be applicable, most multinationals will be required to follow IFRS in their financial reports (Thomas, 2009).

A reasonable conclusion about the dilemma multinational companies in Latin America and elsewhere are facing is that the issue is not whether or not to prepare for convergence or adoption of IFRS but when and how to do it if they have not already done so. In order to be able to adapt to these global changes, many multinational stakeholders must have access to education about IFRS. These stakeholders include managers and accountants, auditors, investors, and regulators. For this educational process to be successful, professional associations, industry groups, and higher education institutions must integrate IFRS in the curricula for their program offerings (Thomas, 2009).

This debate has been going on in the United States and Canada (Anonymous, 2009; Choi, 2008; Larson & Brady, 2009; LeBlanc, 2007) and elsewhere (Coppin, 2007). While many may agree that accounting professionals in the United States must be able to obtain an adequate knowledge and understanding about IFRS, it is not yet clear as to when and how the curricula changes should take place. Larson and Brady (2009) proposed several alternatives for the integration of IFRS to accounting curricula including the following: web based resources, IFRS accounting textbooks, and discussion of international accounting cases. Charkey (2006) provides an example of a case meant to discuss IFRS in an introductory financial accounting course while Davidson and Francisco (2009) present alternatives for changes to an intermediate accounting course. The available strategies to integrate these resources into curricula may be classified into three basic categories: infusion, development of new international courses, and development of partnerships with foreign institutions (LeBlanc, 2007).

Infusion exposes students to international perspectives by adding foreign culture and geography content to actual core courses, those required for all students, regardless of their major. Development of new international courses requires that more time and resources are spent but allows a deeper understanding into relevant issues than infusion. Partnerships with foreign institutions may enable faculty and student exchanges to expose them to international cultures and knowledge (LeBlanc, 2007).

Specific approaches within these strategies are the comparative approach, the multidisciplinary approach, the issue approach, and the technical approach. Comparative approach means doing comparisons of more than one country or culture in a single course. When this is done in two or more courses, then the multidisciplinary approach is being used. Another strategy is the issue approach, in which cross-cultural issues are discussed in any course. Under the technical approach, computer simulations or other electronic media allow educators to join local and foreign universities' efforts for IFRS education (LeBlanc, 2007).

While these strategies and approaches were designed for university curricula, they could be adapted to develop training programs for financial professionals working in Latin American multinationals. These professionals need current and continuing education to be able to face changing economic and business conditions.LeBlanc (2007) mentions three barriers to internationalization. While these were meant to relate to university faculty, they are applicable to people in charge of training financial professionals in multinational corporations. The barriers are apathy, priority, and isolation.

Apathy discourages trainers from making their best effort to infuse existing courses or develop new ones. This may happen, particularly, if they feel they do not receive enough compensation to motivate them. Priority means that, especially during economic recession times such as the present, international education may not be regarded as important enough in order for necessary improvements to occur.

If people from different departments are used to working in isolation, there is the additional challenge of creating effective cross-functional teams as an essential means for these efforts to be successful and meaningful throughout the entire organization.

The competitiveness of Latin American multinationals increased during the nineties (Martinez, De Souza, & Liu, 2003), and their success continues during the current decade. Their advantages in investing in Latin American countries other than their home arise from different sources such as geographical, cultural, economic, and political similarities. Possible motivations for investing abroad, but within the Latin American region, include finding lower financing costs and growing bigger to avoid being acquired by competitors due to industry consolidation (Alfaro & Hammel, 2006).

Latin American multinationals have had opportunities for expansion arising from their home country's participations in regional free trade agreements. Examples of those trade pacts include the Mercosur – Argentina, Brazil, Paraguay, and Uruguay – and the Andean Pact - Bolivia, Colombia, Ecuador, Peru, and Venezuela. Others do not focus on particular Latin countries but on the region as a whole and grow "pan regionally" or in other regions, such as the United States, Europe, and Asia (Martinez, De Souza, & Liu, 2003). This growth in mergers and acquisitions by Latin American multinationals has enabled them to place 11 companies in the 2009 Fortune 500 ranking (Oxford Analytica, 2010). It is no wonder that Carlos Slim, the Mexican owner of America Movil became the world's richest man, with wealth surpassing that of Bill Gates and Warren Buffet (Miller & Kroll, 2010).

According to the firm Deloitte Touche Tohmatsu (2010), 90 of 172 jurisdictions that they examined require IFRS for companies listed in domestic stock markets, and in 30 additional jurisdictions, IFRS is either allowed or required under certain circumstances. As Latin American multinationals gain a stronger worldwide presence, it will be more necessary for them to have their reporting practices be consistent with IFRS to be able to take advantage of further growth opportunities. The use of these standards calls for a more consistent and comparable way to be accountable to world markets, including investors and lenders, as providers of long-term financing sources, much needed to finance continued business growth. Their financial objectives and reporting practices must be aligned with what is taking place in the global business community. Accounting professionals in their roles as preparers of public reports must develop and implement plans and strategies to acquire knowledge about IFRS, by ensuring proper education and training (Dulitz, 2009). An important step for integrating IFRS in the business curriculum is to have international topics and issues in accounting courses. These international issues must include not only differences in accounting standards but also insights about cultural, economic, and legal-political contexts that help explain these differences (Larson & Brady, 2009).

This type of knowledge is essential for accounting professionals working in Latin American multinationals since these differences must be taken into consideration for engaging in successful global negotiations and transactions and communicating their economic results. However, Latin American's diverse cultural heritage is an important asset and advantage for their professionals who may, as a result, be from a bicultural or multicultural ethnic background. Other types of materials that may be used for individual accounting courses are publications from websites about IFRS and participation in study and work abroad opportunities (Larson & Brady, 2009).

Financial managers and analysts, as users and interpreters of accounting information, must also be acquainted with IFRS. The eventual adoption of IFRS rules or convergence of local accounting principles to IFRS has an impact over financial ratios and metrics that depend on accounting data for performance assessments and financial decision making. This also affects budgets and other reports for internal use (Fabiszak, Feinberg, Jurek, & Sarkissian, 2009). In order to make valid judgments and reach sound conclusions, financial professionals must understand the consequences of differences in accounting standards. IFRS also have an impact over tax compliance for multilatinas doing business in multiple tax

jurisdictions. Accounting choices made under international standards have important tax implications which must be considered for tax planning, as well. Tax planning implications include effects over taxable and foreign source income and foreign tax credit and effective tax rate payable from all income sources and accounting for income taxes (McGowan & Wertheimer, 2009).

Other professionals who need, at the very least, basic knowledge about IFRS are bankers, audit committee members (Gannon & Wagner, 2008), and investors. Bankers need it for analysis of loan applications; audit committees, for demonstrating financial statement proficiency; and investors, to make judgments and decisions about their best saving alternatives (Bukics, Masler, & Speer, 2009). The challenges to be met in complying with IFRS should be faced as part of a joint learning effort between multinationals and the academic community (Schott Karr, 2008) in Latin America and other regions.

Individual multinationals and Latin American multinationals must make a cost benefit analysis to attempt to make an optimal transition to and continued use of IFRS. To be successful, companies are advised to make an assessment of the resources they need, including educated professionals, and the risk they may face, in terms of costs. Examples of these costs are costs of resources, time spent, consulting fees, and costs of changing accounting information systems to be able to report in accordance with IFRS (Heffes & de Mesa Graziano, 2007).

METHODOLOGY

The methodology for this investigation discusses sample selection, IFRS readiness measure, and statistical tests. The sample of universities selected for this study was obtained from 2010 Webometrics's World Universities' Ranking on the Web. This database is maintained by the National Research Council of Spain. The goals of the rankings of this database are 1) assessment of higher education web processes and outputs, 2) measurement of volume, visibility, and impact of universities' web pages, 3) powerful information sources, 4) cultural, linguistic, economic, and historic diversity, 5) global coverage. The unit of analysis is institutional domains, or independent web presence, of universities and other higher education institutions. Weighted scores result from the use of four criteria: size (number of pages), visibility (unique external web links), rich files (Adobe Acrobat or PostScript, Microsoft Word, and Microsoft PowerPoint), scholar (papers and citations according to Google Scholar). The weights are 20%, 50%, 15%, and 15% for size, visibility, rich files, and scholar, respectively. Based on the weighted scores, Webometrics publishes the top 100 universities per region (Spain's National Research Council, 2009).

For this paper, the sampling frame included the top 100 rankings for Latin America and United States and Canada, with undergraduate programs with majors in accounting or finance, offering courses in accounting, finance or taxation. A random sample of 30 institutions was taken for each of the two before mentioned regions (60 institutions, in total). The 60 institutions are established in Argentina, Brazil, Chile, Colombia, Mexico, Puerto Rico, United States or Canada. These countries are in different stages of convergence to or adoption of IFRS. Argentina will require public companies to prepare financial statements under IFRS for the year ended December 31, 2012. Voluntary adoption of IFRS should have begun in January 2011 (Deloitte, 2009a).

Brazil planned to make it mandatory for its financial institutions to adopt IFRS in 2010. This adoption process would be a gradual harmonization of accounting and IFRS standards. The mandate recognizes the importance of IFRS to achieve a greater integration of its financial sector into global financial markets and the resulting need to present high quality financial information for world investors to be able to make financial decisions. Compliance with IFRS ensures greater growth opportunities through increased and improved access to global capital markets. The greatest challenges that Brazil, and other Latin American countries may face, include IFRS education and need for changes in organizational culture (Contabilidad y Responsabilidad para el Crecimiento Económico Regional, 2007). Chile was scheduled to begin

conversion to IFRS on 2009, expecting to benefit from greater integration to international markets and, consequently, lower costs of capital, because of increased choices of financing opportunities (Contabilidad y Responsabilidad para el Crecimiento Económico Regional, 2009).

In 2009, Colombia approved an act to establish the process of convergence to IFRS. Migration of accounting systems to IFRS was expected to have been under way on 2010, and initial adoption in the preparation financial statements could occur for the year ended December 31, 2013 (Actualicese.com, 2010). Mexico, in turn, decided to make IFRS mandatory beginning in 2012 (Deloitte, 2009b).

Puerto Rico's accounting standards are those of the United States. The United States extended the deadline for mandatory adoption of IFRS by public companies until 2015. In the meantime, it will continue developing a work plan for IFRS adoption (Defelice & Lamoreaux, 2010).

Canada planned full adoption of IFRS to be required of public for-profit businesses by the year 2011 (Deloitte, 2010). The IFRS readiness measure is the percentage of institutions for which evidence was obtained of the existence of some kind of international accounting course. It was also considered whether the institution had an international finance or international taxation course. The information was obtained from course descriptions, lists of courses, or program objectives found on institutional websites. It must be noted that this information was the one most readily available and did not include course syllabi or actual course offerings for specific academic terms. The statistical tests performed were z tests, based on an approximate normal distribution, to test for differences in proportions in two finite populations (Krishnamoorthy & Thomson, 2002). There were two research hypotheses.

Hypothesis 1. The IFRS Readiness in Latin America is different from that of the United States and Canada.

The null hypothesis is that $p_1 = p_2$ where p_1 is the percentage or proportion of institutions from Latin America with an international accounting course and p_2 is the same proportion, but from United States and Canada institutions. Both are measures of IFRS readiness, so that the null hypothesis implies that both regions are "equally" ready for IFRS adoption or convergence. The test for IFRS readiness was done using the STATA statistical package, under the following menu commands: Statistics; Summaries, tables, and tests; Classical test of hypotheses; Two-sample proportion test. STATA reports the results of the two tail test and the one tailed tests with their respective p values (Acock, 2008).

Hypothesis 2. The Global Perspectives measure in Latin America is different from that of the United States and Canada.

A similar test was run for the following null hypothesis: $p_3 = p_4$. The proportion of institutions from Latin America with an international course of accounting, finance or taxation was measured by p_3, while p_4 stood for the corresponding proportion for the United States and Canada. This test intended to measure whether significant differences existed between "international" readiness, through courses with global perspectives, whether or not it they included an international accounting course. The STATA command .prtest was used to compare the IFRS Readiness and the Global Perspective measures for Latin America and the United States and Canada. The value of the z statistic (Park, 2009), for the IFRS Readiness model (IR), is calculated as

$$z_{IR} = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\hat{p}_{pooled}\left(1 - \hat{p}_{pooled}\right)\left(1/n_1 + 1/n_2\right)}} \qquad (1)$$

where

$$\hat{p}_{pooled} = \frac{n_1\hat{p}_1 + n_2\hat{p}_2}{n_1 + n_2} = \frac{y_1 + y_2}{n_1 + n_2} \quad (2)$$

n_1 = the total number of sample institutions from Latin America = 30;

$\hat{p}_1$ = the proportion of sample institutions from Latin America with IFRS Readiness;

y_1 = the number of sample institutions from Latin America with IFRS Readiness;

n_2 = the total number of sample institutions from United States and Canada = 30;

$\hat{p}_2$ = the proportion of sample institutions from United States and Canada with IFRS Readiness;

y_2 = the number of sample institutions from United States and Canada with IFRS Readiness.

Similarly, for the Global Perspectives model (GP),

$$z_{GP} = \frac{\hat{p}_3 - \hat{p}_4}{\sqrt{\hat{p}_{pooled}\left(1 - \hat{p}_{pooled}\right)\left(1/n_3 + 1/n_4\right)}} \quad (3)$$

where

$$\hat{p}_{pooled} = \frac{n_3\hat{p}_4 + n_4\hat{p}_4}{n_3 + n_4} = \frac{y_3 + y_4}{n_3 + n_4} \quad (4)$$

n_3 = the total number of sample institutions from Latin America = 30;

$\hat{p}_3$ = the proportion of sample institutions from Latin America with Global Perspectives;

y_3 = the number of sample institutions from Latin America with Global Perspectives;

n_4 = the total number of sample institutions from United States and Canada = 30;

$\hat{p}_4$ = the proportion of sample institutions from United States and Canada with Global Perspectives;

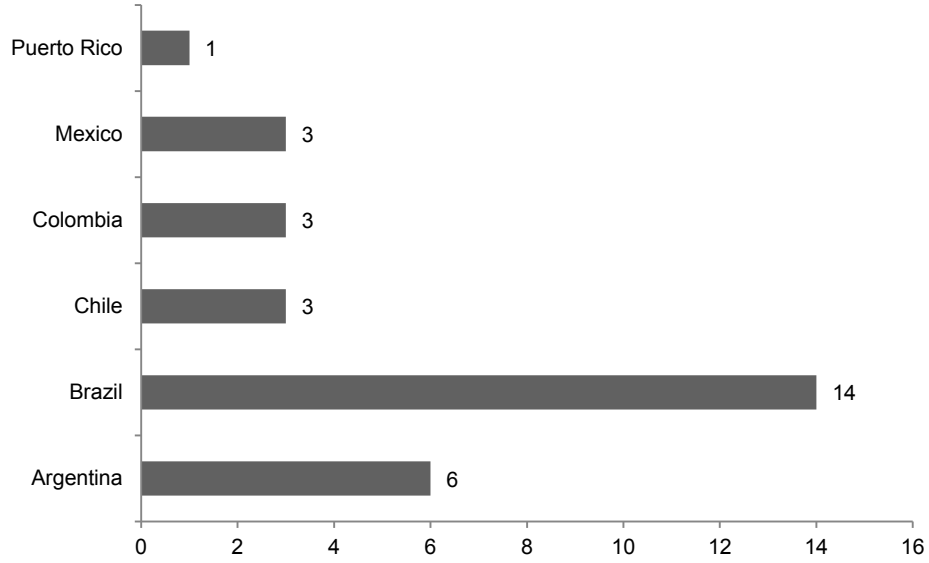
y_4 = the number of sample institutions from United States and Canada with Global Perspectives.

ANALYSIS AND DISCUSSION OF RESULTS

The descriptive analysis presents the number of institutions per each country represented in the samples, the IFRS Readiness in Curricula, and the Global Perspectives in Curricula, while the inferential analysis summarizes the main findings that are finally discussed. Figure 1 shows the number of institutions per country included in the Latin American random sample. It can be observed that Brazil was the country with most institutions, 14 in total; followed in a distant second place by Argentina with six; then, by Chile, Colombia, and Mexico, with three, each; and, lastly, by Puerto Rico, with one.

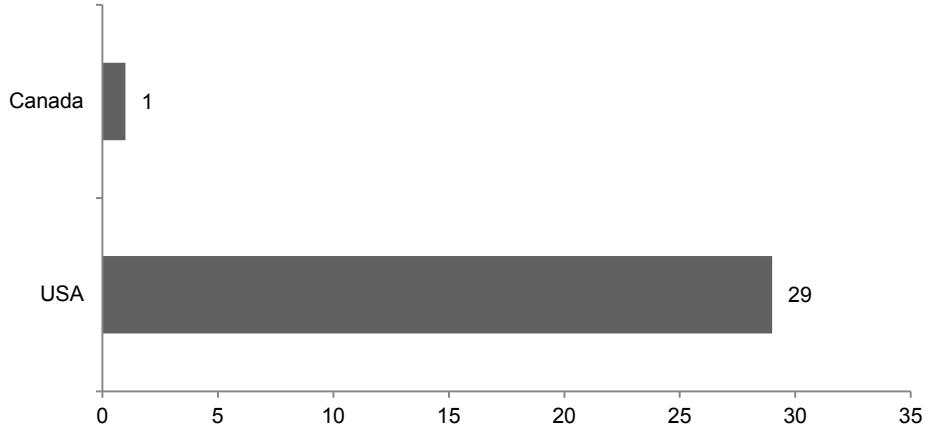
As can be observed from Figure 2, the United States and Canada's random sample only included 1 institution from Canada, so that it can be concluded that the results are really applicable to the United States. Table 1 shows that the IFRS Readiness measures for both – Latin America and the United States and Canada – were no higher than 33%. However, the Global Perspectives Measure for the United States and Canada appeared to be much higher, at 93%.

Figure 1: Number of Institutions per Country in Latin America



This figure shows the number of institutions per Latin American country included in the sample for the IFRS Readiness and Global Perspectives measures. The sample of institutions was randomly selected from 2010 Webometrics's World Universities' Ranking on the Web.

Figure 2: Number of Institutions per Country in United States and Canada



This figure shows the number of United States of America and Canada institutions included in the sample for the IFRS Readiness and Global Perspectives measures. The sample of institutions was randomly selected from 2010 Webometrics's World Universities' Ranking on the Web.

Table 1: IFRS Readiness and Global Perspectives: Latin America vs. United States and Canada

	IFRS Readiness	**Global Perspectives**
Latin America	23%	33%
USA & Canada	27%	93%

This table shows the percentage of sample institutions for which evidence was obtained of the existence of some kind of international accounting course (IFRS Readiness) or international accounting, finance, or taxation course (Global Perspectives). IFRS Readiness or Global Perspectives was assigned an outcome of "Yes" if evidence of such course(s) was found, "No", otherwise. The sample of institutions was randomly selected from 2010 Webometrics's World Universities' Ranking on the Web. Information for individual institutions was obtained from their web pages.

Table 2 presents the results for the test results for differences in IFRS Readiness between Latin America and the United States and Canada. The observed z test statistic equals 0.30, with a p value of 0.77, which leads to not rejecting the null hypothesis that both proportions are equal.

Table 2: Difference in IFRS Readiness: Latin America vs. United States and Canada

IFRS Readiness	Mean	Standard Error	Test Statistic	P Value
USA & Canada	0.27	0.08		
Latin America	0.23	0.08		
Difference	0.03	0.11		
	Under H_0	0.11	0.30	0.77

The null hypothesis, H_0, is that the proportion for Latin America equals that of the United States and Canada. The results show the proportion's mean value and standard error for the United States and Canada sample, the Latin America sample, and the difference between the two proportions. The last row presents the results of the hypothesis test.

Contrary to the previous test results, the high observed test statistic of 4.82 (p value less than 0.001), in Table 3, suggests the rejection of the null hypothesis that the proportion for Latin America equals that of the United States and Canada. This implies that the difference in the IFRS Readiness measure was not significantly different from zero, while the 0.93 value for the Global Perspectives measure for United States and Canada was significantly higher than that of 0.33 for Latin America.

Table 3: Difference in Global Perspectives: Latin America vs. United States and Canada

IFRS Readiness	Mean	Standard Error	Test Statistic	P Value
USA & Canada	0.93	0.05		
Latin America	0.33	0.09		
Difference	0.60 ***	0.10		
	Under H_0	0.12	4.82	0.00

*The null hypothesis, H_0, is that the proportion for Latin America equals that of the United States and Canada. The results show the proportion's mean value and standard error for the United States and Canada sample, the Latin America sample, and the difference between the two proportions. The last row presents the results of the hypothesis test. ***Results are significant at the 1 percent level.*

The evidence from the hypothesis testing showed a similar IFRS readiness for Latin America and the United States and Canada. Regarding the Global Perspective, both measures were higher since they account for the inclusion in the curricula of international courses that are not necessarily in the accounting discipline. In this area, however, the United States and Canada region appeared to outperform the Latin American region.The answer to the question of whether or not both regions are, indeed, ready for the convergence or adoption of international financial reporting standards depends on the minimum value for the IFRS readiness measure that would be acceptable to reach this conclusion. In a survey conducted in the United States (Munter & Reckers, 2009), 22% of the participants answered that they would significantly incorporate IFRS into the curriculum during the 2008-2009 academic year, while 33% would do so in 2009-2010. These numbers are similar to the ones presented in this research, and the authors are less than satisfied with these findings. If these results are used as benchmark, it could be concluded that neither the curricula in Latin America or the United States are ready for international financial reporting standards. However, it is important to note that this research only considered the evidence of additional courses due to unavailability of information about actual topics covered in courses offered. Thus, an alternative explanation for the apparently low readiness scores is that infusion has occurred, meaning that IFRS topics are covered in different business courses, without necessarily offering separate international courses.

CONCLUSIONS

This study's major findings suggest that Latin America's business curricula may not yet be ready for convergence to or adoption of international financial reporting standards (IFRS). The evidence also

implies that the region possibly also needs to improve the global perspective of their curricula in order to adequately prepare professionals to work not only in Latin American multinationals but also in businesses that only operate locally, in the ever-increasing integration of world goods and capital markets.

However, the limitations of this investigation provide opportunities for future research to obtain a deeper understanding of the business curricula strengths and potential shortcomings. These limitations include the following: unavailability of information about actual topics included in course syllabi; sample not large enough to include representation from more Latin American countries; not knowing the actual needs and challenges faced by Latin American multinational international transactions. It is recommended that academics in Latin American countries do a self-assessment of the situation in their home country through the analysis of course syllabi used in local universities. This would address the lack of information and representativeness issues. An additional recommendation for further research is to survey managers of Latin American multinationals to learn what their point of view and perspectives are regarding IFRS readiness and the IFRS competency of the accounting, finance and tax professionals that work in these companies. These professionals, themselves, should also be surveyed to find out in what ways their education has helped them to be effective in their jobs and what they feel they lacked.

Further research about IFRS and their relationship to Latin American multinationals will provide for a deeper understanding of the nature of their international transactions and enable them to ensure access to global capital markets, at the lowest possible costs. This will ultimately result in more transparent financial reporting and more value for managers, investors, creditors, and individual Latin American societies.

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BIOGRAPHY

Myrna R. Berríos is an Assistant Professor of Finance, Taxation, and Accounting at University of Turabo. She can be contacted at School of Business and Entrepreneurship, University of Turabo, PO Box 3030, Gurabo, PR 00778-3030. Email: mberrios34@suagm.edu

STRATEGIC PLANNING DIMENSIONS IN ITALIAN UNIVERSITIES

Giovanni Bronzetti, University of Calabria
Romilda Mazzotta, University of Calabria
Maria Teresa Nardo, University of Calabria

ABSTRACT

The paper examines the strategic planning process in Italian Universities. We identify two macro strategic planning dimensions: one for the process and one for the plan substance. We create a synthetic indicator of plan and process quality. Based on quality of plan and process we create a cluster matrix of universities. We also conduct empirical research to determine if university size is correlated with quality of strategic planning. We find a positive correlation between university size and the process and plan quality.

JEL: L52, O21

KEYWORDS: Strategic Planning, Italy, University

INTRODUCTION

Strategic planning is an approach to plan the future for the university. Through strategic planning, resources are assigned to increase benefits to various stakeholders including students, employers and society. The tool of strategic planning is the plan that guides reallocation of resources. Formalized strategic planning develop in America during the 1950s, in the mid-1960s and throughout the 70s expanding to most large corporations (Mintzberg, 1994). In public organizations strategic planning developed during the 1980s in Anglo-Saxons contest and during the 1990s in Italy. In higher education the idea was spreading knowledge was a target to be pursued independent from the costs incurred (Kelly and Shaw, 1987). Recently however, universities face funding reductions requiring them to optimize choices. Strategic planning assumes the key role for design the future path of the university (Shirley, 1983). In other words, it has become necessary for universities to define their mission, analyze their frontiers and identify eventual growth and improvement opportunities in a competitive setting. All this planning and programming autonomy would guarantee a successful result.

In the Italian university context, strategic planning has received strong support through a law (State Law 168/03/89). The law is designed to favor university autonomy and rationalization of the problem of scarce availability of resources (Rebora and Turri 2008; Borgonovi, 1996) and offer universities new planning possibilities in line with the new requirements. Adoption of new laws, as defined by article 1 ter of the Italian State Law n. 43/2005 represents a cornerstone of the new setting. It entrusts universities with the planning task and responsibility within the macro-areas of intervention ad defined by Ministry of Education and Research (MIUR).

The main purpose of this study is to analyze the strategic plans of public Italian universities, to identify the strengths and weaknesses of individual plans, and to provide a report on best practice. To identified strengths and weaknesses of individual plans we recognized two macro strategic planning dimensions: one for the process and one for the plan substance. We value a synthetic indicator of plan and process quality. We have adopted the Higher Education Management Review Committee's (Hoare Committee) and the English Higher Education Funding Council's (HEFCE, 2000) criteria as a way of evaluating the plans, and added to these our own judgment. While style is not as important as substance, the

effectiveness of a plan can be influenced by its conciseness or verbosity and its precision or vagueness. Based on quality of plan and process we create a cluster matrix of universities.

The paper proceeds as follows. In the next section we briefly discuss the relevant literature on strategic planning in universities. In the third section we present legislative references. Data selection and research methodology are described in section four. In sections five and six we illustrate the dimension of strategic planning and analyze the empirical findings. We summarize our conclusion and research future perspectives in the final section.

LITERATURE REVIEW

Strategic planning is a relatively recent business innovation. An organization's strategic plan represents its planning at the highest level (Kotler et al. 2007). It is generally a tool for formalizing the organization's vision, mission and values; opportunities and threats, strengths and weaknesses; goals and objectives and their strategies (Robbins & Coulter, 2005). The strategic plan provides an idea of the overall direction of a company indicating how it will develop if it is able to control matters (Hannagan, 2005). Strategic planning has several benefits: its encourages management to think ahead systematically; forces the company to sharpen its objectives and policies; leads to better coordination of company efforts, provides clearer performance standards for control (Kotler et al., 2007) and helps organizations understand how to compete more effectively for the future (Hamel and Prahalad,1994).

Although public sector institutions, including universities, were generally slower than their private sector counterparts to adopt strategic planning, it is now a widely accepted management practice in the institutional sector (Bryson, 1995; Legge, 2002; Scott, 1998, 2005). The planning process is simply a means with which universities respond to external challenges of ever greater complexity. Universities are unlike productive or bureaucratic organizations because uncritical acceptance of planning practices developed in different contexts could be dysfunctional. Universities should not be considered homogeneous institutions. Each university is organized into faculties with distinctive educational capabilities shaped to provide a knowledge base for the array of different professions (Chaffee, 1985; Keller, 1983; Olsen, 1989). Furthermore, the difference between academic and corporate personnel lays in the nature of their autonomy. Academics are not subject to institutional or directional authority . Their sole role and purpose is to promote knowledge through distinctive competences. Governance systems of corporate and academic landscapes are equally different. Universities are characterized by joint governance consisting of the Academic Senate, Board of Directors and boards of each faculty and department (Paletta, 2004). A process known in Italy as "aziendalizzazione" has received strong support through a law designed in favor of the university autonomy and rationalization of the problem of scarce availability of resources (Rebora, 2008). In this derived setting programming, controlling tools took a central role in strategic planning, as demonstrated in various studies (Osborne, Gaebler,1992; Hood, 1995; and Borgonovi, 1996).

It has become apparent that the strategies defined and medium and long run objectives imposed by universities are a result of strategic planning. The strategic plan is a formalized written document which contains a complete list of decisions taken by the university governing institutions and defines the streams of action to undertake in order to attain the predefined objectives. At this point the plan is considered a pivotal element of the strategic planning process and requires explicit elaboration as established by law.

An evolution of university legislation has caused Italian universities to adopt strategic planning tools and controlling mechanisms. The evolution path is summarized by two laws. Italian State Law 9/03/89 n.168, Ministry of University (MURST) granted teaching, research, organizational, financial and accounting autonomy. Italian State Law 15/03/97 n.59 ratified planning criteria of the university education system.

The Law Decree dated march 31, 2005 n.43 has profoundly modified the preceding legislation introducing both a different methodology and procedures. In accordance with the new Law Decree implementation, the Ministry of Education was entrusted the task and responsibility to define medium and long-term strategic objectives directly for the universities as well as the responsibility to plan their actions. This allows them to enhance specific characteristics as well as distinctive capabilities and other skills related to particular academic context. The implementation decree 43/2005 issued throughout the course of 2007 has defined a procedure for the three-year strategic plan. The result of this action has been practical application of the strategic planning within Italian universities. It is also important to understand the phases of the planning process and the players involved as well as the substance of the documents and their formalization as established by legislation.

The legislation establishes a draw-up plan procedure to be accomplished within a three-year period and approved by July 30 of the following year. The legislation does not elaborate on the substance of the plan or its specifies. Generally as established by university statute and/or internal regulations the universities assign an academic council for the definitive plan approval. DM 216/2006 specifics that the validity of approved plans is for three years with the most recently approved plans relating to the 2010-2012 time period. The plan may be adapted annually by 30 July of each year on the basis of evaluation and monitoring carried out by the referent Ministry and the National Committee for University System Evaluation (NCSVU). The monitoring and measuring criteria are established by the Ministry. Programmers need not be delivered to the Ministry. Instead weights are assigned to the results obtained as established by the article 4, comma 33, of Ministerial Decree as of July 3 2007, n.362. As new regulations of university programs are evaluated with reference to implementation as a function of specific indicators. An ex-ante quantification of indicators is not required by law.

New legislation requires that any activity related to planning is defined by the system general guidelines. Furthermore universities most adopt a three-year plan containing 21 predefined indicators. The Ministry constantly monitors and evaluates programs offered by the universities. Monitoring and evaluation activities are relevant for the distribution of the Fund of University Financing (FFO).

DATA AND METHODOLOGY

The purpose of this research is to analyze the three-year strategic plans of the public universities with regard to process and substance. Our enquiry line has a two-fold research objective: 1. Identify the dimensions the authors consider a "good practice" of the strategic planning, and 2. Examining the implementation state of the strategic planning tools in the Italian public universities.

The research work accomplished is characterized by four distinctive phases. The first phase is data mining and analysis of the public universities three year plans/strategic plans. The next phase involves identifying elements considered "positive" within the process and the substances of the strategic planning process. The third phase is construction of the "process-content" matrix on the basis of the "positive elements" identified. Finally, the last phase is positioning and pattern analysis for the set of universities subject to strategic planning process research.

Data mining of documentation for the first phase of the research framework was carried out online for those universities with online access. A written request was sent to the strategic planning, controlling and evaluation departments of those universities that do not offer online access to the data. Written requests were targeted to individuals considered cornerstones of the strategic planning process. In the second phase, we defined the strategic planning dimensions with respect to the doctrinal positions (Cugini, Pilonato, 2007) and the guidelines related to research on both national and international levels (Miur, Higher Education Management review Committee's, English Higher Education Founding Council's – HECFE, Civit). We identified two macro strategic planning dimensions; one for the process and one for

the substance. The process dimension included 6 elements and 11 elements were used to define the substance dimension. The choice of elements stems from earlier studies that have examined these types of issues (Bouckaert-Halligan, 2008) and Otley, 1999). These elements have also been used in OECD studies (OECD, 1997, 2004, 2005). The elements been taken in account in order to define the two macro dimensions are presented in Table 1.

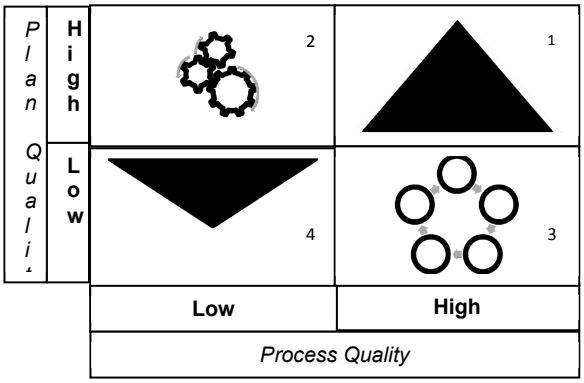
We have omitted points 5 and 6 relating to process dimension from further consideration due to the impossibility of explain these dimensions in quantitative terms and the impossibility of distinguishing between the quality of two different plans approved by the Academic Senate and the Board of Directors. Moreover, Hoare Committee (1995) and HEFCE indicated it as desiderata for sound university strategic planning. Assuming the above defined elements of the process and the substance dimensions we construct a matrix with the X-axis defined as "the process quality" and Y-axis as "the plan quality". The graph is presented in figure 1. We synthesized the elements of the substance dimension in the "plan quality" variable. We have synthesized the elements of the process dimension in the " process quality" variable. Two macro-variables, process quality and substance quality, allow us to construct a matrix with a "low" and "high" quadrant area.

Table 1: Key Element of Process and Substance Dimensions

Process Dimension	Substance Dimension
1) Form of document presentation and web release to obtain larger transparency;	1) Plan formalization of mission, vision and social values of analyzed university;
2) Shareholder participation in defining mission, vision, strategy and objectives (involvement strategy);	2) SWOT analysis construction to identify stakeholder expectations and strategies;
3) Process clarification;	3) Definition of strategic plans and their coherence with ministerial guidelines (MIUR)
4) Strategic plan synchronization with other planning documents and available financial resources;	4) Presence of ministerial indicators;
5) Devotion and competence of participating support institutions in plan drawing up;	5) Presence of alien indicators of performance to those defined by Ministry;
6) Voting body individuation.	6) Temporal consistency of data analyzed (historic value series);
	7) Target definition;
	8) Specification of liable parties;
	9) Benchmark analysis;
	10) Explicit monitoring related expectations;
	11) Description of strategic plan process framework and dynamics.

In this table are synthesized the six key element of process dimension and the 11 key element of substance dimension. This key element are used to evaluate the universities' strategic plan.

Figure 1: Dimensions of "Process-Substance" Matrix



The matrix is built according to the quality of the plan (high/low) and the process (High/low). The quadrant 1 contains the "best" ( ) performance strategic planning; quadrant 2 contains the "lagging behind" ( ) while quadrant 3 described as "hermetic" situation ( ) and quadrant 4 represent realty with The dynamic elements" ( ).

Based on these variables we identify four different theory profiles which define the diverse approaches to the strategic planning process. Quadrant 1 contains characteristics of "the best" performance strategic planning adopters. The first quadrant represents a distinctive plan of quality and presence of impact and result indicators, historic value series and target measurement dimensions. There is an interconnection and synchronization with other documents called coherent dimension. Stakeholders are involved at process planning called the strategic involvement dimension. Finally the strategic plan is distributed to various users, both externally and internally called the transparency dimension.

Universities characterized as lagging behind in new governance policy implementation are those that have scored low on levels of distribution and disclosure to the external parties, the performance dimension, as well as those that receive low scores on the description of the plan substance and mission, vision and values to the external and internal users called mission and strategy. Universities with low levels of objective quantification and resources, the presence of indicators without targets are also placed in the fourth quadrant.

A situation described as hermetic is characteristic of universities that place more importance on the plan quality with respect to process quality. These universities fail to launch and implement the strategic plan and/or fail to connect the plan to financial resources. These universities use external plan distribution for political/formal purposes without any strategic involvement present.

The dynamic elements represent an exemplary reality where the strategy involvement process has been launched and aspects of the substance in terms of objective indicators and target have been met. These universities are classified into the 2nd quadrant. Universities which freely disclose the strategic plan to external parties have completed part of the transparency elements. Inside each quadrant the process quality and the substance quality vary. The value grows as one moves up and to the right in the graph.

The research was carried out on 59 Italian state universities combined into the following groups based on enrollment in the 2009-2010 academic year: Mega size (over 40,000 enrolled), large (20,000 to 40,000 enrolled), medium (10,000 to 20,000 enrolled) and small (less than 10,000 enrolled). The data has been extrapolated from the MIUR National Student Record, last update September 2010). There are 11 mega size universities, 18 large universities, 18 medium universities and 12 small universities. We have omitted from our research two public universities for foreign students in Perugia and Siena and six specialized academic institutions (Scuola Normale di Pisa, S.Anna di Pisa, SISSA Trieste, SUM Firenze, IMT Lucca, IUSS Pavia). We collected online sixteen three year strategic plans out of 59 universities in total. The remaining universities were contacted by phone or e-mail. Five more planning documents were collected giving a sample size of 21 universities. The sample is described in Table 3.

Table 3: Sample Description

University Size	University (Number)	Sample (Number)	% Impact on the total sample	University Sample
Mega	11	6	55%	University of Bari, Bologna, Firenze, Palermo, Roma La Sapienza and Torino
Grandi	18	4	22%	University of Calabria, Pavia, Politecnico Torino e Verona
Medi	18	5	28%	University of Ferrara, Macerata, Modena e Reggio Emilia, Udine e Trieste
Piccoli	12	6	50%	University of Cassino, Foggia, Reggio Calabria, Roma Foro Italico, Sannio e Teramo
Totale	59	21	36%	

This table indicates the Universities included in the sample. There are 6 mega size universities (55% out of total); 4 large universities (22% of total); 5 medium size universities (28% out of total) and 6 small size universities (50% out of total).

RESULTS

Process Variable Results

The first phase of the research framework revealed scarce web disclosure of the three-year plans. Only 16 universities disclose to the public the strategic plan and three other universities the document has been identified on the web but not accessible to the general public due to password protection (University of Milano, University "Cà Foscari" Venezia and University of Tuscia). The web pages for the rest of the sample have no visible trace of the three year plan/strategic plan. Online document searches and phone and e-mail requests gave us insight into the level of transparency of strategic plan distribution to users. A disturbing level of external and internal disclosure emerged. The principle of external transparency is foreign to 73% of the universities. This includes 68% that do not publish the strategic plan online and 5% that keep it password protected. Over the course of this research we discovered that most internal support offices do not know precisely all the information disclosed in the strategic plan while some portion of the contacted personnel are not aware of its existence. According to academic literature, stakeholder involvement is a crucial element of strategic planning process (Coda, 1988; Donaldson-Preston, 1995; Freeman, 1984). In the public sector citizen expectations are centered around predefined objectives where a key element is the process quality of strategic planning implementation.

Analysis of the documents revealed discouraging examples of strategy involvement. In order to examine the existence of the strategy involvement process we considered those plan contents which contain a description of the implemented process. From this analysis it is clear that not all universities describe the process within the plan. Furthermore, in those that do disclose the description of the process it is not always clear that the involvement strategy was implemented.

Plans that do disclose tend to share the plan and its strategic objectives to different interest-motivated parties. The example of shareholder involvement refers to University of Bari. The proposals and observations regarding the plan definition are integrated in the final version of the plan. Furthermore the University of Foggia refers to stakeholder involvement citing the following: "the process has to be of ongoing and open kind." Politecnico of Torino included the following sentence in their strategic plan: "the process is fruit of democratic involvement of parties." In 48% of cases the strategic objectives have been jointly defined.

The next element considered is "Competence of the support departments in the plan drawing up process" We were able to analyze this element for only for those universities which explicitly state the name of participating group members. Some strategic plans reveal that during the strategic planning process specialized committees/discussion groups were organized. The University La Sapienza is the only Italian university which delegated a supporting role to the Evaluation Committee. The University of Bologna employed the Planning and Controlling Department to design the strategic plan. We found that in 54% of cases the plan design was supported by committees and commissions created for that purpose.

We have also found a link between the strategic plan and financial resources provided for planning documentation. The evidence shows a link between financial resources available specifically to the operational part of the plan. The University of Ferrara has limited themselves to the simple listing of financial resources needed without further explanation of their application. University Mediterranea of Reggio Calabria provided more detailed information on those activities which require more financial resources than available.

It appears from the analysis conducted on the statutes, in 33% of cases the plan development is the explicit responsibility of the Academic Senate. The remaining cases show that the competences of the Academic Senate are generally those of coordination and planning of the teaching and research process.

However in 58% of cases the plan was approved by the Academic Senate or the Senate in close cooperation with the Board of Directors.

We identified only one case where the approval was voted inside an adjusted body such as the Enlarged Academic Senate. The sole case where the Board of Directors was responsible for the plan approval is at University of Pavia. In two cases responsibility of the Academic Senate consisted only of plan design with no explicit guidance of how the plan should be approved.

Substance Variable Results

Plans have been given names including "The Three Year Plan" (Bari, Foggia, Modena-Reggio, Emilia and Florence), "The Program and the Three Year Plan" (Roma Foro Italico, La Sapienza, Udine, Verona and Cassino), "The Planning" (Pavia) and "The Planning Plan" (Torino). Some call it "The Document of Three Year Period Planning" (Trieste). There are also variations such as "The Three Year Development Plan" (Macerata, Sannio and Benvento). However in the majority of cases it is called "The Strategic Plan" (Bologna, Calabria, Ferrara, Mediterranea Reggio Calabria, Teramo, Politecnico Torino and Palermo). These terms are outlined in Figure 2.

The level of detail and substance quality for the above mentioned plans differs significantly despite the fact some plans carry the same name. Generally speaking all plans include the minimum amount of content established by legislation. At first this might seem obvious. However universities should not limit themselves to established legislation but seek more explicit ways to formalize the plans. The legislation does not obligate universities to send more information to the Ministry than raw results obtained from the established indicators. As an example the strategic plan of the University of Bologna presents beyond what is written in the general guidelines. University Mediterranea of Reggio Calabria, the University of Palermo and The Politecnico of Torino also follow this trend.

Figure 2: Document Taxonomy

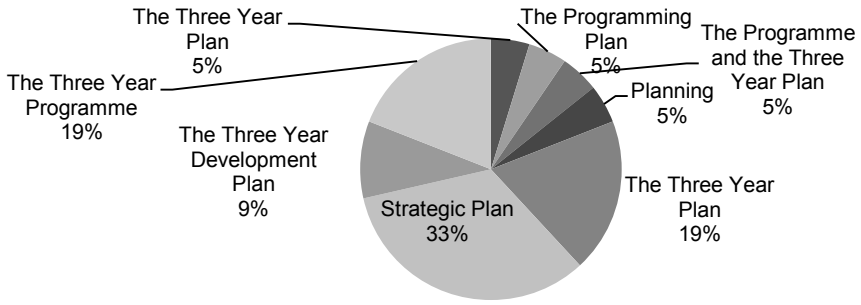


Figure1 shows the different names of the planning documents.

The level of detail and document quality can be attributed to university aspirations. For example, the University of Palermo seemed to build a base for wider consensus among faculty on the future university path that could strengthen its position among other universities on national level. University of Bologna found the plan as an opportunity to motivate the work of academic staff on process quality and other activities and how they may be linked to scarce financial resources without raising tensions among the faculty. The level of detail decreases in cases where the sole purpose of the document is to meet regulatory compliance.

The plan must be flexible and in line with the ministerial guidelines. Constant adjustment is need in accordance with interim results obtained. However, we have found only two cases in which the annual plan adaption process took place (Bari, Calabria). There is one case in which the university Statute

prescribes the plan adaption process every fourth year (Mediterranean University) despite what has been established by legislation.

The document introduction describes the process of the document creation in 72% of plans examined. Mission and strategy definition is present in 71% of the plans analyzed and objectives are defined as a function of SWOT analysis in 57% of cases and in line with ministerial guidelines. In general all universities used a uniform method to identify objectives.

Each University gives different taxonomy to objectives and ministerial directives. University of Bari defines first the university guidelines, not in line with the Ministerial guidelines, and priority areas to follow in the three-year period. It then turns to the definition of strategic objectives which are coherent with the University mission and values. Strategic objectives should be a function of operational objectives and their attainment directly related to them. University of Calabria has identified five areas of ministerial involvement which are later transformed into the strategic objectives, operational objectives and defined streams of action. The Politecnico of Torino, University of Modena-Reggio Emilia and University of Palermo have omitted operational objectives substituting them with development guidelines which are combined with the distinctive strategic objectives and initiatives/specific actions defined. The strategic plan of Mediterranea of Reggio Calabria is similar with the change in taxonomy and number of designed elements, 12 strategic missions, 75 objectives and 160 strategic micro actions. University of Firenze discloses branches of action, traditional, research and teaching, organizational and human resource articulated through the functional initiatives to be implemented.

A variety of objectives require adequate measuring tools (Bryson, 1995), which are defined as indicators. The Ministry identifies 21 indicators or target values related to predefined action areas. In 71% of the cases universities explicitly refer to the indicators, while in 60% of the cases historic values series are available for the indicators. Few universities have assigned weights to choice areas of study despite the lists easily available in the three-year planning program of Cineca (PRO3). The universities include other than ministerial indicators in the 63% of cases. University of Bari, for example, proposes positioning indicators and performance indicators specific to each activity carried out. University of Calabria uses indicators used by institutions such as FFO, ACQUIS and the National Italian Census. University of Foggia, Torino, Bologna, Politecnico of Torino, University of Torino and University of Sannio do not explicitly disclose formalized information on measurement tools even if the formal documents include these measurements. Interim target evaluation is another important element of university comparison. This practice has not been popular among the universities. Among those that adopt a "good practice" are the University of Bologna. The deadlines for actions undertaken is specified. The University of Teramo draws up predicted results not only qualitatively, how to evaluate academic programs in light of international standards. University of La Sapienza and Mediterranea give the exact year that an initiative must be accomplished. For one case targets were assigned for each objective branch defined, University of Calabria, and for some and for all guidelines (University of Bologna and University of Ferrara).

Some universities explicitly state the responsible party for objective attainment (University of Teramo, Calabria, Bologna, Palermo and Bari). The definition of responsible parties is a central issue of the supervisory system. Not all universities explicitly state the process of implementation of interim monitoring and planning activities. These elements are disclosed in strategic plans of Bologna, Calabria, Ferrara, Macerata, Pavia and Mediterranea. A few universities which carry out benchmark analysis (La Sapienza Roma, Mediterranea, Bari). University of Firenze, Sannio, Teramo, Udine and Verona are excluded from these analysis as their plans did not contain this information.

University Positioning

The analyzed universities are distributed using a ranking system in the above described matrix. University positions are obtained from values attributed to the process and substance variables. Quality of the process variable depends on nominal values which could not be quantified. However, it is possible to express quantitatively the information contained in qualitative variables. For this purpose we control the categorical variables, process and quality, for the presence of the modalities. We assign the variable two values: one if the condition exists and zero if the condition is absent. With this approach the maximum value obtained for the process quality is four and maximum value obtained for the plan quality is eleven. Once the process quality variable and plan quality variable have been quantified we need to determine the medians. The four quadrants of the matrix function as medians determined. Those universities for which plan quality and process quality are above the median representing a sample of universities with superior quality of planning activities. On the other hand universities which score below the median have weak planning activities. Our intention is not to identify "good" and "bad" universities but to compare universities against the identified variables. The universities are positioned in the matrix as described in Figure 3.

Figure 3 shows the best planning practices are in University Mediterranea of Reggio Calabria which is positioned in the extreme of quadrant 1 with high plan and process quality. University of Calabria, La Sapienza Roma, Palermo, Bari, Ferrara and Bologna also placed among the best. Universities in the 2nd quadrant are defined as hermetic and are characterized by a weaker process quality variable (University of Pavia, Modena, Reggio Emilia and Trieste). The 3rd quadrant is characterized by universities with a weaker plan quality variable (University of Foggia, Macerata, Torino and Politecnico of Torino. Universities identified as "dynamic" have strategies which differ in content from predefined objectives. Hermetic and dynamic universities could transfer to the 1st quadrant with small modifications of their strategic plans. Universities in the 4th quadrant are lagging behind in the new governance policy interpretation. These universities have not disclosed the strategic plan in accordance with the ministerial guidelines but have submitted excerpts of other official academic documents (University of Firenze, Verona and Sannio)

CONCLUSIONS

The objectives of this research are to investigate different modalities of strategic planning process implementation and different uses of the three-year plans in the strategic planning process of public universities. Our findings show that universities organize their planning processes both out of necessity and legal obligation. The analyzed strategic plans provide a variety of contents, objectives, detail level, correlated indicators, targets and public disclosure. Autonomy of process formulation make the task of finding common elements suitable for research more difficult but not impossible. The strategic plan can help organizations define and achieve their strategic objectives, align behaviors and attitudes and, ultimately, have a positive impact on performance. In this article, we argue that the strategic plan and definition of its roles are fundamental factors determining its success and impact on university performance.

In this research, the strategic plan analysis allowed us to obtain both qualitative and quantitative results. Summing up the qualitative results we conclude that: 1) public disclosure of the three-year plan has not been satisfactory; 2) there are four different approaches to the strategic planning process as identified by our model, 3) successful placement of universities with strategic plans have been analyzed.

Figure 3 – University Positioning in "Process-substance" Matrix

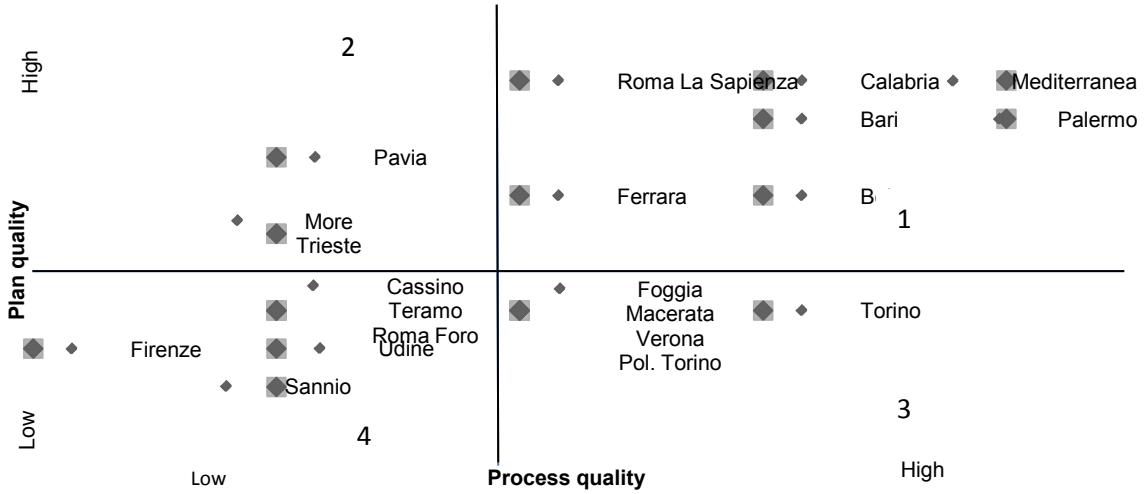


Figure 3 shows the position in the process matrix of the various universities. The quality of the process increases moving from the origin to the right side of the table as the quality of the plan increases going up from the origin. In the first quadrant includes high quality plan and process universities.

The three-year plan formulation is a complex task characterized by a high level of uncertainty, numerous difficulties and asymmetric information. If the scope of the does not have a purpose of obligatory bureaucratic procedure we would witness more harmonic development of universities with greater planning process transparency divided within the academic community.

Our study focuses on the Italian educational system. Further studies might examine other university systems and legal requirements. Other dimensions might also be examined including social and intellectual capital as part of the strategic planning process.

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BIOGRAPHY

Dr. Giovanni Bronzetti is an Associate Professor of Business Administration at University of Calabria, He can be contacted at Facoltà di Economia, Università della Calabria, via P. Bucci, 87036 Arcavacata di Rende (CS), Italy, Email: giovanni.bronzetti@unical.it.

Dr. Romilda Mazzotta, is researcher of Business Administration at University of Calabria. She can be contacted at Facoltà di Economia, Università della Calabria, via P. Bucci, 87036 Arcavacata di Rende (CS), Italy, Email: romilda.mazzotta@unical.it

Dr. Maria Teresa Nardo, is a Ph.D. at University of Calabria. She can be contacted at Facoltà di Economia, Università della Calabria, via P. Bucci, 87036 Arcavacata di Rende (CS), Italy, Email: mt.nardo@unical.it

TEACHING ETHICAL BUSINESS PRACTICES IN A MULTICULTURAL CLASSROOM: UNDERSTANDING DIFFERENCES TO FIND COMMON GROUND

Karin Caruso, Southern New Hampshire University
J. Stephanie Collins, Southern New Hampshire University
Susan Schragle-Law, Southern New Hampshire University
Jeannemarie Thorpe, Southern New Hampshire University

ABSTRACT

In a global economy undermined by unethical business practices, business schools have a social mandate to teach and apply ethical decision making principles that graduates can carry into their future business professions. Management education must be designed to identify and encourage students to internalize universally accepted ethical principles. The multicultural make-up of management education programs provides business educators with a unique opportunity to engage upcoming generations of global business leaders in ethical behaviors. In 2010, approximately 691,000 international students sat in US classrooms, with the largest percentage studying business management. This plurality of cultures permits the consideration of diverse ethical views to identify commonalities among them, so that an emergent ethical framework will respect and accommodate those views, and allow for a conceptual 'bridge' between students' specific, ethical systems and a shared ethical system.

JEL: A20, M10

KEYWORDS: ethics education, moral reasoning, religiosity, multicultural classroom

INTRODUCTION

The corporate malfeasance perpetrated by companies such as Enron, Qwest, Xerox, Halliburton and Merck which resulted in market losses of approximately $US 7 trillion provided evidence of unethical business practices at the turn of the century. Despite the United States' quality corporate laws in place before these events (Gourevitch, 2003) and the passage of the Sarbanes-Oxley Act of 2002 after, unethical business practices continue to undermine business performance and investor confidence.

Various accrediting, academic and professional organizations have become increasingly concerned about the consequences – social and economic – of unethical business practices. Both AACSB and ACBSP business accrediting bodies have emphasized the need for more business ethics education. At the same time, leading academic institutions have made commitments to revise management education to graduate ethical business leaders. Codes of ethics are being added, revised or re-emphasized by organizations from the AICPA (American Institute of Certified Public Accountants) and the CIMA (Chartered Institute of Management Accountants) down to the Electronic Securities Association (Joachim,2010) and the Confederation of Construction Specialists(Code of, 2008).

When debating whether (1) bad business and regulatory decisions, or (2) a breakdown in integrity caused the most recent global financial crisis, more than half of the Ethics and Compliance Officers Association annual meeting attendees attributed the crisis to a breakdown in integrity (Coultas, 2009). The American Advertising Foundation (AAF), in reaction to a third from the bottom finish in a 2007 poll for honesty and ethics, has established an Institute for Advertising Ethics (Neff, 2010). Ahead of the curve for some international ethical standards is the Aerospace Industries Association whose Board of Governors signed

off on its Global Principles of Business Ethics for the Aerospace and Defense Industry in 2009 (AIA leadership signs global, 2009).

Despite actions on the part of governments and professional organizations, a review of periodicals – national and international – continues to provide overwhelming evidence that unethical practices are still undermining our increasingly interdependent global economy. International trade surpassed 50 percent of global GDP in 2007 (Rodrigue, 2011). In the United States alone from the first quarter of 2009 to the first quarter of 2011, exports and imports had increased by 35.7 percent and 38.7 percent, respectively (U.S. International Trade in Goods and Services, April 2011).

These trends in ethics and global interdependence have given business schools a social mandate to emphasize ethics and educate their graduates in ethical decision making. Recognizing global interdependence factors, past decades have generated calls for a transcultural ethics code that would be implemented multinationally (Thompson, 1997). Although some cultural relativism would need to be accommodated, research by Jackson (1997) suggests that a core of ethical norms can be identified and potentially applied globally. Since multiple studies have found that business education that incorporates ethics has a significant positive effect on ethical behavior (Okleshen and Hoyt, 1996, Lopez, et al., 2005, Bennis & O'Toole, 2005, Lau, 2009), the classroom seems a logical place to begin such a process.

Past and current literature has focused mainly on holistic perspectives of ethics. The goal of this paper is to conduct an exploratory review that will identify the challenges of teaching ethics in a multicultural environment. The findings will provide faculty with a framework for understanding students' ethical heritage and how these diverse values must be respected to design a universally accepted ethical framework that students can internalize, adopt and carry into their professions, a type of "third culture" (Evanoff, 2006). This paper is the first in a series that addresses moral reasoning, religion and culture as moderators of ethical behavior. The review of literature that follows presents justification for using multicultural graduate management classes as a laboratory to explore transcultural ethics.

LITERATURE REVIEW

As a result of the $7 trillion loss in capital markets (Heffes, 2003), Congress passed the Sarbanes-Oxley Act of 2002 (SOX) that imposed new regulations, oversight, duties and penalties on corporate executives, their boards, auditors and legal counsel as well as security analysts. (See Appendix A for a summary of key provisions of this act.) Although SOX did increase regulation and control, unethical business practices continue. From July of 2002 through July of 2007, as a result of SOX and increased government oversight, the US Justice Department obtained 1,236 total corporate fraud convictions against 214 CEOs, 53 CFOs and 129 vice presidents ("Corporate convictions", 2007). Increased accountability should mitigate fraud, but has it?

In the investment industry, Ponzi schemes have become a minefield for the public to navigate with caution. The U.S. Department of Justice launched "Operation Broken Trust" in August of 2010 and by December of the same year had indicted 532 defendants who took 10.3 billion in losses from 120,000 investors (Lewis, 2010). Although none compare to Madoff's multibillion dollar rip-off, Ponzi schemes have surfaced across the nation and even in Bahrain ("Ahmad Hamad," 2011).

Fortunately, attitudes among accounting professionals with regard to earnings management have changed significantly in a pre-versus-post SOX environment (Grasso, Tilley & White, 2009; Fischer & Rosenzweig, 1994; Merchant and Rockness, 1994). Although earnings management is less acceptable, it remains vaguely defined, open to interpretation and a common component in many fraudulent reporting cases.

Despite increased legislation and monitoring of the business sector, the United States continues to have the highest instance of financial aberrations among developed nations. However, the U.S. is not alone. In India the CEO of Satyam Computer Services, B. Ramalinga Raju, confessed to fraudulent accounting and the Central Bureau of Investigation will hear the case this summer ("India's Mahindra Satyam", 2011). Citigroup officials working in India have been charged with "…falsifying accounts, breach of trust and conspiracy" and a Hero executive, Sanjay Gupta, has also been arrested in connection with these Citigroup charges ("Case registered against", 2011).

In the spring of 2010, a Chinese court sentenced Huang Guangyu, Ex-Gome chairman, to a 14-year prison sentence and $88 million in fines for bribery and other crimes against the state (Dean, J. & Ng, J, 2010). In contrast, Jack Ma, founder and CEO of China's Alibaba, recently fired over 100 sales people for signing gold supplier contracts with fraudulent suppliers, costing the company $2 million in damages (Epstein, 2011). In Japan, Livedoor's ex-CEO Horie was condemned in the press although not officially charged with buying stocks in off-hours trading, repeating stock splits and other questionable practices to boost the company's growth prospects (Tahara, 2006). Even Sweden's 150-year old insurance company saw its former CEO Lars-Eric Petersson sentenced to two years in prison for awarding $21.5 million in bonuses without board approval ("Skandia Former CEO", 2006).

Unethical practices are certainly not restricted to financial reporting, but often have an immediate impact on the bottom line; positively in the short-run but not long-term. Doctors are under increased scrutiny for earning "consulting fees" from drug and medical device manufacturers. Biotronik has a 95 percent market share for pacemakers at a Nevada hospital compared to a national market share that just breaks 5 percent after cardiologists received compensation as consultants (Meier, 2011). Construction giant Skanska was fined $19.6 million for violating rules to promote subcontracting to minority-owned businesses (Grossman, 2011). In New York, two hospital administrators and two contracting firms were recently indicted for bid-rigging and fraud on more than $42 million in hospital contracts (Rockoff, 2010). And Apple and Dell continue to refute the sweatshop label that has been attached to Foxconn's Shenzhen plant despite increased suicides and allegations of mismanagement and inhumane treatment of employees (Dean and Tsai, 2010).

Clearly, SOX and subsequent legislation by the U.S. and other nations has had limited success in creating an ethical business climate. This strongly suggests that legislation may not be the answer to rampant ethics problems. Morals and values can help clarify and perhaps even erase those issues. However, this solution is fraught with difficulties. For example, in the United States it is difficult to instill values that have a global perspective when dealing with a culture that emphasizes the individual above the community and defines success in terms of one's bank account. Other nations face similar challenges due to religion and culture. Clearly the global business environment would benefit from management education that embraced a common set of ethical business practices. This research is an early-stage investigation into the problems inherent in such an endeavor, with an eye toward solutions driven by business and management education.

In an effort to influence institutions of higher education and their development of future managers, the United Nations Global Compact Office recommended the establishment of a "principles-based engagement platform" for academic institutions. An international taskforce comprised of deans, presidents and representatives from business schools and university institutions created a set of Principles for Responsible Management Education (PRME, 2011). Among the members of the taskforce were representatives from AACSB International.

The PRME initiative called upon academic leadership to create "educational frameworks, materials, processes and environments that enable effective learning experiences for responsible leadership".

Currently, 371 international academic institutions have signed the PRME initiative. They have pledged to facilitate and support dialog on critical issues related to global social responsibility and sustainability.

In recent years business schools and their faculties have been reflecting on content and methodology in their classrooms. (Miller, 2009) Some of that reflection has centered on their responsibility to produce ethical business professionals. There is widespread dissatisfaction in a society rife with excessive materialism, economic mismanagement leading to global crises, corporate scandals, ethical lapses and a lack of accountability in business practices. (Khurana & Nohria, 2008) Schools and universities are increasingly expected to play a role in students' moral development, with the expectation resulting in more ethical business professionals (Bennis & O'Toole, 2005).

Traditionally, business students are taught to maximize wealth as a primary objective in corporate practice. Recently accrediting institutions have begun to mandate that business schools teach and apply ethical decision making principles. (Falkenberg & Woiceshyn, 2008) Graduate and MBA programs in particular must impart useful "societal" skills and norms of ethical behavior and become more rigorous and relevant.

For business schools to become more relevant, training for business disciplines must incorporate professional codes of conduct. Since many issues facing business leaders involve questions of judgment and/or ethics, students must be able to identify ethical and moral problems, analyze them and understand their implications before making practical decisions. Therefore business schools' curricula need to be infused with multidisciplinary ethical questions reflecting issues business professionals face daily (Bennis & O'Toole, 2005).

If, as Aristotle has said, leadership is the ability to serve the common good, the education of business leaders demands a component of moral reasoning. Lawrence Kohlberg, a respected leader in moral reasoning research, suggests that moral development is measured not by people's actions, but how they reason about right and wrong (Kohlberg, 1981). His theory includes six stages in individual moral development, ranging from ethical behavior stemming from fear of punishment, through ethical behavior in conformation to group norms, to ethical behavior stemming from individual moral views and principles. "Each stage is meant to be not only a chronological and a developmental evolution from the previous one but also morally superior to it" (Donleavy, 2008).

Ethical awareness seems to increase with age and experience (Colby, et.al., 1983). In a study by Peterson, Rhoads and Vaught (2001), the results demonstrated that ethical standards were higher among business professionals over 30 years old. As people mature and develop, they move into higher levels of moral development (Dawson, 1997).

Given currently accepted views on moral growth and development, and on desired moral and ethical performance expectations of business professionals, it is clear that schools play a role in developing ethical professionals. However, closer examination of Kohlberg's theories will identify other formative pressures on moral and ethical development, predominantly in the early, and therefore critical, stages. Culture, religion, and family values are strong influencers, and that influence is already in place by the time students reach higher education venues. For business education to have a lasting impact, it must appreciate the values that students hold. This is a difficult task intensified by the diversity of moral reasoning and religions found in a multicultural classroom.

THE ROLE OF RELIGION AND SPIRITUALITY IN ETHICS

Most scholars assume that ethics are a product of culture, religion and spirituality (Rashid and Ibrahim, 2007, Vitell et.al, 2005). The following discussion will address the differences that might result in

different ethical views, based on these variables, and the effects that they might have on a student's ethical framework. A distinction is made between religion and spirituality (Bjsarnason, 2007, Emmons, 1999). Religion can provide a set of guidelines for behavior based on principles that come from a higher power, a single God or multiple gods. Spirituality comes from within the individual, and whatever behaviors are elicited are based on what that person believes fit into the context of a search for meaning and transcendence. Culture interacts with religious and spiritual beliefs, and the specifics of an individual upbringing by the family to influence how a person views ethics (Okleshen and Hoyt, 1996).

In order to understand individual students' own definitions of ethics, it is necessary to understand what factors have influenced each student, and how those influences might have shaped that student's ethical views. Students come from many different backgrounds, and have different religious and spiritual ideas. A discussion of a representative sample of religious and spiritual proscriptions is below. (see Exhibit A)

Judaism, Christianity, and Islam are monotheistic religions with clear rules and guidelines for moral behavior. The final authority is God. Each of these religions has a sacred text (Talmud, Bible, Qur'am) that adherents believe to be the word of God. Strict adherents will use their respective sacred texts to define what is 'right' and 'wrong,' or ethical. The relationship to God is on a personal level. The individual's actions determine what rewards or punishments he/she will receive in an afterlife.

Hinduism is a religion with many gods, each of whom represents some aspect of a supreme being, Brahman, the supreme reality above all. The religion is not monolithic, in that adherents may choose to honor a particular aspect of Brahman. Hindu religious life might take the form of devotion to God or multiple gods as aspects of Brahman, the duties of family life, or concentrated meditation. Individuals seek enlightenment, and there is no one prescribed path. The sacred texts, the Vedas, include tightly defined codes of conduct and morality. There is reincarnation after death until enlightenment is achieved.

Buddhism is not a religion, in that it does not suppose a god. Instead, it is a practice of spirituality and a search for a transcendent truth. Neither punishments nor rewards are meted out by a higher being. The effect of bad acts is simply a consequence of those acts. The individual makes a judgment about an immoral or unethical behavior based on whether that behavior brings him or her closer to enlightenment. The individual must view all actions in the context of their effect on himself or herself and on others. There are no punishments, only a failure to achieve enlightenment, if unethical behavior is pursued. Reincarnation after death is a way of restarting on the path to enlightenment.

Confucianism is perhaps best understood as an all-encompassing humanism that neither denies nor slights [God or] Heaven. Confucianism has been followed by the Chinese for more than two millennia. It has deeply influenced spiritual and political life in China; its influence has also extended to Korea, Japan, and Vietnam. East Asians may profess themselves to be Shintoists, Taoists, Buddhists, Muslims, or Christians - but seldom do they cease to be Confucians. The main principle of Confucianism is humaneness, which signifies excellent character. Loyalty to one's true nature, reciprocity, and filial piety constitute virtue. Confucianism is characterized by a highly optimistic view of human nature. Human beings are teachable, improvable, and perfectible through personal and communal endeavor. Aside from its important ethical principles, Confucianism does not prescribe any specific rituals or practices. These are filled by the practices of Chinese religion, Taoism, Buddhism, or other religions which Confucians follow.

Shintoism, at its core, is a set of beliefs in the mysterious, creating and harmonizing power of "kami," the forces of the earth and nature, and in their truthful ways. Shinto is polytheistic. Kami are associated primarily with permanent features in the landscape, such as unusual mountains, rocky cliffs, caves, springs, trees and stones. Shinto holds a generally positive view of human nature. Man's nature is sacred, though in need of purification. An individual must revere the basic human rights of everyone as well as his own. Shinto is described as a religion of *tsunagari* ("continuity or community"). The Japanese regard

each person as the bearer of a long, continuous history that comes down from his ancestors and continues in his descendants. He is also considered as a responsible member of various social groups. There is no one sacred text that defines rules for behavior. Some humans become kami after death, as a reward for good behavior.

Taoism **(**Daoism**)** is based on the teachings of the Tao Te Ching, a short tract written in the 6th century BC in China, its emphasis is on spiritual harmony within the individual and the world. This complements Confucianism's focus on social duty. Most of Taoists live in China, Taiwan or Southeast Asia. The underlying belief is that human beings are born pure, and should continue to maintain that state during their lives. A Taoist does not struggle, oppose, or strive. The focus of most religious Taoism is attaining immortality. This can have various meanings: eternal life, longevity of life, or attainment of superhuman physical abilities. One way to achieve immortality is to behave in a moral way that is in harmony with the Tao. There is no afterlife, only non-being. Thus, there is no reward or punishment after death.

By having a broad understanding of what students believe before discussing ethics, it is possible to realize how those beliefs are similar, with the goal of a generally accepted understanding ethics in practice. We consider all the major religions in this paper as equivalent in terms of their effects on the ethics that people may hold. Religiosity is significantly correlated with ethical perceptions (Conroy and Emerson, 2004, Parboteeah, et.al, 2007). However, while religion plays an important role in developing ethics, it would appear that the specific religious belief that a person holds is not important, only that he or she holds them. Yi-Hui Ho (2009) found that accounting students with religious beliefs revealed higher levels of ethical reasoning abilities than their counterparts who did not hold religious beliefs. However, no significant difference in ethical-reasoning abilities was found among respondents with different religions overall. Hodge (2006) refined the concept further with respect to what kind of religiosity was most influential, and found that respondents who defined religion in personally constructed terms, without reference to the transcendent, reporting higher levels of ethical compliance.

There have been many different approaches to determining exactly how religion leads to ethical frameworks. Yu (2005) for example, considers the difference between western and eastern approaches, as exemplified by Socrates and Confucius, and shows that both have serious religious beliefs, yet each has secular rational grounds for doing what he is doing. Finally, each philosopher has a different view about how human beings are related to the divine being, and the difference determines their different approaches to ethics.

OTHER ISSUES IN BUSINESS ETHICS

Human beings need trust, empathy, and solidarity, particularly in a business environment. By mutual consent, we must grant one another a certain degree of moral credit, that is, we must presume that behavior will be ethical and predictable. In order to proceed, the parties to any business dealings must somehow find a way to share the definition of what constitutes ethical behavior. By focusing on the similarities between religious and ethical systems, students may be able to come to an understanding of how a common set of ethical values can further their progress.

What is required is a sense of global ethics, to provide people the means to assess, form, and direct their moral awareness of the world and their place within it, and how to interact with others. Global ethics properly attends to the rightness or wrongness, the justice or injustice, of global dynamics, as well as the social reality they constitute. By educating today's students in this concept, we may be able to provide them with a way to move forward, no matter what their religious beliefs.

Culture is generally considered to be the shared beliefs and symbols evolved by a collective group that meaningfully differentiates the group from other groups (Macdonald, 2000, Alas,2006). The

comprehensive GLOBE study in 2004 (House and Javidan) defined culture as values, beliefs, motives, and interpreted meanings of significant events and common experiences among members of a collective group, transmitted over generations. The study identified nine core dimensions as culture markers: uncertainty avoidance; power distance; institutional collectivism; in-group collectivism; gender egalitarianism; assertiveness; future orientation; performance orientation; humane orientation, all of which manifest in both values and performance. A number of these share common aspects with Hofestede's landmark studies (1980, 1991). According to Hofstede societies will display differences along four dimensions that relate directly to their cultures: power distance, individualism, masculinity and uncertainty avoidance. Placement of the individual's culture on these dimensions directly impacts perceptions in an ethical situation (Vitell et al.1993).

For example, Hofstede's *individualism* construct suggests that group norms, the need to please a group and to remain a member in good standing within the group will play a significant role in ethical decision making of an individual from a country low on individualism, from a collectivist culture. A person from a country high in individualism would instead be less influenced by the group norms and will weight self interest more highly in an ethical situation. Vitell et.al.(1993) therefore proposed that formal codes of ethics within an industry, profession or corporation would be less likely to influence an individual's ethical behavior, either during the formulation of a personal code of ethics or when considering an ethical situation. Research by Hegarty and Sims (1979) also found that personal desire for wealth was correlated with unethical behavior while the profit goals of an employer had no such correlation, thus suggesting that people from individualistic cultures were more likely to behave unethically for personal gain than for corporate gain. Cultures with high collectivism, on the other hand, have a propensity to place group goals above individual goals (Gelfand, et al., 2004).

Evidence of the power distance dimension theory can also be identified in ethical situations. In a culture where power distance is large, the dynamic of accepted inequality of position would cause a subordinate to succumb to pressure by a superior, and to follow their lead in ethical/unethical behavior. In a country with small or medium power distance, an individual would be less likely to follow a superior and/or formal company norms, and more likely to conform to peers' behaviors and informal norms (Ferrell et.al. 1983).

Similarly, a culture with strong uncertainty avoidance sets up a dynamic where there would be little tolerance of deviation from formal, organizational norms, which thus dictate behavior (Ouchi, 1981, Alas 2006). However, in countries low on uncertainty avoidance, such as the US, there is a weaker, unpredictable bond between organizations and employees, and unethical behavior may be more accepted.

According to Hofstede (1980), countries characterized as masculine tend to encourage and support competition and ambition, with a goal of material success. Feminine cultures encourage the opposite, and thus may be more attuned to unethical practices, particularly masculine tactics. Masculine cultures may not recognize such situations as being unethical.

Culture has been identified repeatedly in the literature on ethics as being a major contributor to an individual's perception of what constitutes ethical behavior. There is also support in the literature for an association between religiosity and culture. While that aspect is not explored here, it is clear that these factors, whether separately or in combination, impact students in classrooms to varying degrees, and that awareness of those factors is essential to the goal of a common understanding of ethics.

CONCLUSION: THE MULTICULTURAL CLASSROOM AS A LABORATORY

Education has been shown to influence individuals' ethical behavior (Okleshen and Hoyt, 1996, Lopez, et al., 2005, Bennis & O'Toole, 2005). Lau (2009) found that education in ethics makes a positive impact

on students' ethical orientations by enhancing moral reasoning and stimulating the development of a personal sense of ethics. According to Kohlberg (1981), moral reasoning develops over time through education and experiences, in distinct, sequenced stages. Each stage demands increasingly complex thinking over a broadening scope. Later research on cross-cultural moral reasoning (Snarey, 1985, Ma and Cheung, 1996) suggests that the early stages of Kohlberg's theory appear to be universal across cultures. They found, however, that the latter stages will vary by culture. Students enrolled in graduate business programs are diverse in age, experience and culture. These students are likely in the latter stages of developing moral reasoning. Graduate programs, therefore, provide an ideal laboratory for identifying shared ethical principles.

In 2010, approximately 691,000 international students sat in U.S. classrooms, with the largest percentage studying business management. The fact that these students are going abroad for education suggests potential for cross-cultural understanding. Assuming that some degree of a shared ethical system is possible, it should begin with these future business leaders sitting across desks and tables throughout the U.S. This paper is merely a prelude to future endeavors. Its objective is to understand the ethical perspectives and tools our students bring to our classrooms. The multicultural classrooms in which we are privileged to teach permit the consideration of diverse ethical views to identify commonalities among them, so that an emergent ethical framework will respect and accommodate those views, and allow for a conceptual 'bridge' between students' specific, ethical systems and a shared ethical system.

Future research should consider the role of the faculty and the values and ethics they contribute to the classroom, as well as directly assessing the specific ethical systems of students and identifying commonalities and points of divergence.

Exhibit A: Key Aspects of Religions and Spiritual Beliefs

Religion or Belief System	God(s) and the state of the Universe	Purpose of life	Afterlife	Rewards for good behavior	Sacred Texts/Authority
Judaism	One God	Obey God, live ethically	Vague	In this life	Bible and Talmud
Christianity	One God, three personae	Serve God	Heaven and hell	In heaven	Bible as the word of God
Islam	One God	Submit to God	Heaven	In heaven	Qu'ram and tradition
Hinduism	Many gods as aspects of one God	Seek enlightenment	Reincarnation	Enlightenment	Vedas
Buddhism	No god	Gain enlightenment	Reincarnation	Enlightenment	
Shintoism	Multiple gods in nature (kami)	Obtain good things by purification and calling on kami	Death is bad and impure.	Some become kami after death	Kojiki and Nihon-Gi
Confucianism	No specific god	Fulfill one's role in society with honor, loyalty, and propriety	None	None	Analects
Taoism	Pantheism: unity consist of opposites	Inner harmony, peace and prosperity	None	None	Tao Te Ching

This table is a comparative representation of key aspects of religions and spiritual beliefs which influence culture and moral reasoning and which are likely to be represented in a multicultural classroom of a graduate management program.

Appendix A: Summary of Key Provisions of the Sarbanes-Oxley Act of 2002

TITLE I – PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD

1. Establishing an oversight board made up of five financially literate members – two must have been CPA's and the remaining three must not.
2. Audit firms must register and be licensed by the board.
3. The Board will establish auditing and related attestation standards, quality control standards, and ethics standards to be used by registered firms. One standard will require working papers to be kept for seven years.
4. The Board will inspect registered firms – once a year if a firm audits more than 100 issuers and at least every three years for all other audit firms.
5. The Board may impose sanctions ranging from suspension to permanent revocation as well as monetary penalties, censure, or a mandate for additional training to any registered firm that violates the Act, other security laws, or the rules of the Board.
6. SEC has oversight over the Board, including rules and disciplinary actions.
7. Provides for funding of the Board from audit fees.

TITLE II – AUDITOR INDEPENDENCE

1. Prohibits audit firms from providing non-audit services to the issuing firm.
2. Requires rotation of lead audit or coordinating partner and the reviewing partner every five years.
3. The audit firm reports to the audit committee of the board (not senior management) and must disclose any critical accounting policies or practices and all alternative disclosure treatments consistent with GAAP, and the audit firm's recommended or preferred treatment.
4. To avoid "conflict of interest" no person in senior management could have been employed by the company's audit firm during the 1-year period preceding the audit.

TITLE III – CORPORATE RESPONSIBILITY

1. Public company audit committees are responsible for hiring and supervising the auditing firms and have access to resources for the hiring of legal and financial advisors to support their efforts.
2. The CEO and CFO of each issuer shall certify in each annual or quarterly report that they have reviewed the report and, based on their knowledge, that said reports contain no unfair statements and fairly present the financial condition of the company in all material respects.
3. The CEO and CFO and other senior officers are responsible for establishing and maintaining a system of internal controls, and for disclosing any deficiencies in these internal controls to the audit committee.
4. It is unlawful for any officer or director of an issuer to take action to fraudulently influence, coerce, manipulate, or mislead any auditor engaged in the performance of an audit for the purpose of making the financial statements materially misleading.
5. Requires the SEC to develop minimum standards of conduct for attorneys appearing and practicing before the commission.

TITLE IV – ENHANCED FINANCIAL DISCLOSURE

1. It is the responsibility of management to establish and assess internal controls and prepare a report to assess the effectiveness of internal control structures and procedures.
2. The auditor, as part of the audit engagement, must attest to the internal control report.
3. The SEC shall develop rules to require issuers to disclose whether at least one member of the audit committee qualifies as a financial expert, as defined by the act.

TITLE V AND VI – Focused on increase support for the SEC and requirements that clearer and more consistent rules be developed by the SEC, NYSE, and the NASDAQ to safeguard investors from unethical investment bankers or broker-dealers.

TITLE VII – STUDIES AND REPORTS

The GAO will conduct a study and report to assess the impact of the consolidation of public accounting firms.

TITLE VIII – CORPORATE FRAUD AND CRIMINAL ACCOUNTABILITY ACT OF 2002

1. Impose criminal (felony) penalties for altering documents or destroying documents to impede, obstruct, or influence any contemplated federal investigation.
2. Whistleblower protection for employees of publicly traded companies who provide evidence of fraud. The law would prohibit the issuing firm from taking any action against the employee.

TITLE IX – WHITE COLLAR CRIME PENALTY ENHANCEMENTS

1. The CEO and CFO must certify that the financial statements fairly present to condition of the reporting entity.
2. Maximum penalties for willful certification of financial statements known to be misleading will have fines of not more than $5,000,000 and/or imprisonment of up to 20 years.

TITLE XI – CORPORATE FRAUD AND ACCOUNTABILITY

Tampering with a record or otherwise impeding official proceedings shall be fined and/or imprisoned for up to 20 years.

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BIOGRAPHY

Karin Caruso is an Associate Professor of Accounting at Southern New Hampshire University, and can be reached at k.caruso@snhu.edu.

Dr. J. Stephanie Collins is a Professor of Computer and Information Technology at Southern New Hampshire University, and can be reached at j.collins@snhu.edu.

Dr. Susan Schragle-Law is a Professor of Organizational Leadership at Southern New Hampshire University, and can be reached at s.schragle-law@snhu.edu.

Jeannemarie Thorpe is an Assistant Professor of Marketing at Southern New Hampshire University, and can be reached at j.thorpe@snhu.edu.

STUDENTS' EVALUATION FOR MARKET ORIENTATION: EVIDENCE FROM EGYPTIAN BUSINESS SCHOOLS

Abeer A. Mahrous, Cairo University
Wael Kortam, Cairo University

ABSTRACT

This paper aimed at revisiting the market orientation philosophy, through examining the impact of organizational culture on market orientation within Egyptian business schools. Data were gathered from 46 informants in three business schools in Egypt. The informal and implicit nature of the marketing phenomena under investigation and the need to gain scientific insight into them called for using Grounded theory methodology. Grounded theory analysis helped to identify three distinct models in higher education in Egypt. The models show distinct ways in which organizational culture affect market orientation mechanism, which capitalizes on students' evaluation to fulfill the strategic agenda of business schools within their operating marketing environment.

JEL: M31, 120, 123

KEYWORDS: Market Orientation, Organizational Culture, Students' Evaluation, Egyptian Higher Education

INTRODUCTION

The business schools sector is caught up in a web of competitive forces, with market orientation being not merely an essential drive for securing competitive advantage but even a key to survival (Starkey and Nick, 2008). The customer orientation paradigm points to the importance of becoming "customer-centric" in both for-profit and not-for-profit organizations, because this will lead to better value creation and increase the firm's "profit" performance (Deshpandé et al., 1993; Jaworski and Kohli, 1993; Homburg et al., 2000; McNaughton et al., 2001; Tajeddini et al., 2006). The market orientation literature, however, focuses on consumer products in commercial organizations and hence market orientation in higher education (henceforth HE) has not so far received adequate attention (e.g., Siu and Wilson, 1998), perhaps because of the notion that market orientation in the sense that "the customer is always right" is not appropriate to HE and would clearly be corrosive to the educational process (Eagle and Brennan, 2007). In this context, the notion of "the customer is always right" might not hold in all situations; it is better for HE institutions to be less-customer centered in some aspects of the learning process in order to produce better outcomes (Steinman et al., 2000; White, 2007).

Therefore, this research extends the marketing literature examining the validity of some of the traditional parts of marketing theory and such accepted business practices as market orientation in specific contexts, notably HE/business schools. Specifically, using a ground theory approach, this research focuses on identifying the extent/level of market orientation adopted by business schools (i.e., the extent to which they use students' evaluation to generate, disseminate and respond to students' feedback) and on examining the role of the underlying organizational forces (i.e., organizational culture) in explaining the specific level of market orientation adopted by these schools. The paper is organized as follows: first, a synthesis of various areas of the marketing concepts and arenas that the research stems from; i.e., market orientation in HE, organizational culture and students' evaluation. Then, the empirical nature of the research is defended, followed by a rationale for using the grounded theory approach. Finally, the results, discussion and suggestions for future research are presented.

LITERATURE REVIEW

Market Orientation of Business Schools: Implications of Organizational Culture for Market Orientation

Market orientation is usually defined as the process of generating and disseminating market intelligence for the purpose of creating superior buyer value (Kohli and Jaworski, 1990; Narver and Slater, 1990). There are three components of market orientation: (1) customer orientation, (2) competitor orientation and (3) inter-functional coordination. Customer orientation represents a relative emphasis on collecting and processing the information which pertains to customer preferences (Slater and Narver, 1994).

Advocates of market orientation argue that students should be treated like any other purchasers of goods and services because they pay an increasing proportion of their education costs (e.g., Bejou, 2005) while at the same time the demand increases to enhance and ensure consistent quality standards (e.g., Rapert et al., 2004; Clayson, 2009; Clayson and Haley, 2005). Yet opponents of the 'customer' concept argue that students do not pay the full cost of their education and they are not "purchasing" a qualification per se (Eagle and Brennan, 2007). Moreover students are not the only customers of HE; there are other groups who might be assumed to have entitlements, including future employers, the government, families and society in general (Eagle and Brennan, 2007). In addition, the quality of education declines instead of rising every time students choose the easiest programs and courses with soft assessments; conversely they may punish academically demanding staff through critical feedback. (e.g., Clayson and Haley, 2005). However, empirical evidence suggests that, contrary to these claims, there is a positive association between student workload and student evaluation of teaching; students do not reward with high evaluation results those teachers who give them relatively low workloads (Marsh and Roche 2000) or unjustifiably good grades (Eagle and Brennan, 2007).

Nevertheless, this simplistic and polarized perspective of market orientation is not appropriate in a complex service such as HE, where academic rather than commercial values are dominant and there are many stakeholders dissimilar in their needs and interests. Marketing theory and practice can provide more complex conceptions of the customers and ways of responding to them in their academic context. Thus, we need to revisit the market orientation paradigm as it applies to this field to examine the notion of "the customer is always right" in terms of identifying how business schools determine who the "customer" is, what is "right" and when is "always."

Central to market orientation effectiveness is the matter of organizational culture (Piercy, 1990; Siu and Wilson, 1998). Organization culture affects market orientation; this culture is a mix of values, beliefs, assumptions and expectations held in common by members of a particular group and used by them as behavior and problem-solving cues (Hodge and Anthony, 1988); i.e., to determine what information is acquired, disseminated and acted on and more importantly, how such information is interpreted to infer implications for future organizational actions (Baker and Sinkula, 1999). Furthermore, market orientation reflects an organization-level culture and a set of shared values and beliefs about putting the customer first in business planning (Deshpandé, 1999). Nevertheless, market orientation literature has paid little attention to empirically investigating the specific organizational structures and cultures which facilitate customer orientation (Homburg et al., 2000). Therefore, this study will examine the role of organizational culture in seeking to explain the specific level of market orientation adopted by business schools.

Students' Evaluation as Marketing Knowledge

The original purpose of students' evaluation was to provide feedback to the instructor with a view to improving his/her teaching (Lill, 1979). However, the use of students' evaluation to provide market information and feedback is becoming increasingly evident (Gursoy and Umbreit, 2009). Students' evaluation can provide valuable information about the discrepancy between students' experiences and

their expectations. More importantly, it provides information about the interaction between service provider and recipients and the fulfillment of promises to customers. This information is of special importance in service contexts such as HE, because they determine service quality and long-term relationships, as indicated by the "services marketing" and "relationship marketing" paradigms (e.g., Siu and Wilson, 1998).

In addition, the mechanism by which students' evaluation are gathered, disseminated and responded to (e.g., curriculum development, course design, selection of faculty) by the parties responsible represents the three separate elements of market orientation: generation, dissemination and responsiveness (Stewart, 1991; Mahrous et al*.,* 2010). Therefore, this research will examine the extent/level of market orientation adopted by business schools through analyzing the extent of their use of students' evaluation to generate, disseminate and respond to students' feedback

DATA AND METHODOLOGY

Data

The perceived role of students as active customers is quite a recent phenomenon that has emerged only in the past decade in Egypt in general and in business schools sector in particular (Mahrous and Anis, 2010). This change was due to: (1) the globalization and deregulation of HE in Egypt; (2) the economic liberalization and reforms leading to increased pressure to enhance the quality of educational services; and (3) drastic changes in customer bases accompanied by an increased reliance on marketing knowledge as a source of competitive advantage in HE (Mahrous et al., 2010). Accordingly, the current landscape of Egyptian HE from a student's customer recognition standpoint contains four main kinds of business school:

(1) Private Egyptian Universities, which rely for their main source of income on students and their fees;

(2) Internationally affiliated Universities which recognize students as customers due to their international heritage and are under market pressures to manage them as a major source of revenue and a platform for an international image;

(3) Public schools with programs which have opened up to internationalization and competitiveness mainly through adopting the English language as the world-wide language of business. They are striving to adapt business curriculums oriented to international standards, with the appropriate teaching methods and assessment mechanisms. The programs of such schools' always exhibited various levels of reluctance and determination to consider students as customers for the sake of social compliance, economic efficiency and international recognition; and

(4) Public business schools with programs which have remained local as regards the national/social/political agenda in scope, language and staff/student ratio, following policies which recognized students not as customers but as an unsought demand.

The varying levels of practice between these different types of business school with regard to incorporating and responding to students' perceptions and feedback would provide a rich empirical context in which to describe the discrepancies controlling the influence of organizational culture on a market orientation which used students' evaluation as marketing information. This research will draw on three business schools in Egyptian HE; the business school of a leading private university, that of a market leader international university and that of a pioneer public university because of their pioneering and largely leading role in their respective categories. Table 1 lists the descriptive statistics of the sample.

Table 1: Sample Characteristics

	Public University	Private University	International university
Age			
Mean (SD) years	50.2 (4.2)	44.8 (4.6)	43.4 (4.8)
Gender			
Female	4 (21%)	5 (33%)	5 (42%)
Male	15 (79%)	10 (67%)	7 (58%)
Nationality			
Egyptians	16 (84%)	13 (86%)	9 (75%)
Non-Egyptians	3 (16%)	2 (14%)	3 (25%)
Job Title			
Head of Academic Departments	3 (15%)	2 (13%)	2 (16%)
Deans	1 (8%)	1 (6%)	1 (8%)
Vice Deans	2 (10%)	0 (0%)	1 (8%)
Directors of Academic Programs	6 (31%)	5 (34%)	4 (34%)
Students' Representatives	3 (15%)	4 (27%)	2 (17%)
Other (e.g., Faculty Boards' members)	4 (21%)	3 (20%)	2 (17%)

This table shows the characteristics of the sample in the three business schools under examination. All numbers indicate frequency and percentages, except for age; numbers represent means and standard deviations

METHODOLOGY

Rationale: Grounded theory was selected for a number of reasons which are related to the essence of the marketing phenomena under investigation, such as the following: (1) organization culture originated from norms, traditions and pre-held dispositions and beliefs, which are usually insufficiently expressed in written and verbal documentation. Organizational culture is more probably reflected and communicated in a set of explicit and implicit rituals, symbolic signals, manipulations and image positioning (Schein, 1996); and (2) market orientation involves a considerable number of knowledge-based stereotypes, informal learning, the symbolic use of information and incorporations of market information into the organizational pursuits of customer orientation and accordingly how it influences the overall management of market performance (Voon, 2007; Bell et al., 2002). Clearly, the use of positivistic methodologies would not provide a description of the flows and behavioral impacts of the streams of marketing knowledge circulating within the system of knowledge management for market orientation. Therefore, there is a need for appropriate and rigorous qualitative investigations, for example, the grounded theory approach, to identify and develop the implications of organizational culture for market orientation within the context of HE.

Field data collection: The data were collected by individual thematic interviews and complemented by participant observations at meetings (e.g., staff-student course review meetings, instructor review committee, etc.) and the analysis of documents (e.g., students' evaluation forms and transcripts of course/program review meetings). A total of 46 informants were interviewed over a period of 3 months. The informants represented all the schools under study and different levels of their hierarchy. The themes guiding the 1- to 2-hour interviews were: (1) the attitudes, experiences, beliefs and values of the academic institution concerning the phenomena under study; (2) the level of each element of marketing orientation: the level of information generation (the amount and regularity of using students' evaluation as market-generated information); dissemination (the number and type of parties to which information is disseminated and whether there is a formal and specific agenda for communicating students' evaluation to each party); and response (whether the parties respond to information generated and disseminated, the magnitude and immediacy of their response and the measurement of its impact.

Although the themes guided the interviews, the interviewer did not ask exactly the same questions each time. In this way, each successive interview was used to expand knowledge (Silverman, 2000; Marshall and Rossman, 1999). After each interview, the interviewer summarized the emerging themes and these

summaries served as a basis for the reformulation and development of questions and testing of the emerging hypothesis. All the interviews were recorded and detailed notes were taken throughout.

Analysis. An inductive analysis of the data was conducted following the basic principles of grounded theory (Glaser and Strauss, 1967). The main aim was to generate a descriptive theory of the dominant organizational culture present in the schools and to formulate a preliminary hypothesis on the way in which students' evaluation could enhance market orientation within these cultures. Using the "open coding" procedure, the data were categorized into concepts that were suggested by the data rather than imposed from outside (Strauss and Corbin, 1990). Once all the data were examined, the concepts were organized by themes, which became candidates for a set of stable and integrative categories. The properties and dimensions of each possible category were identified. The identification of integrative themes within each division and comparisons between divisions often required further analysis of the transcriptions. This iteration between data and concepts ended when "theoretical saturation" was reached; no new or relevant data emerged and each category was well-developed (Glaser and Strauss, 1967; Seale, 1999). In the light of the iterative process, three categories were identified. These categories were validated by comparing them with the information obtained through: (1) participant observations at the sites of the business schools (i.e., the authors were present at the three business schools during 90 interview days and attended 11 meetings); (3) analyses of documents; and (4) cross-checking the validity of the choice of categories with nine selected informants. Two further procedures ensured that the data analysis was not entirely subjective: (1) during data analysis the authors had many hours of detailed discussions with two colleagues about the cultural models; and (2) a random sample of the collected individual interview data was blindly reanalyzed. The discussion confirmed the validity of categories and the first and second analyses corresponded to each other.

RESULTS AND DISCUSSION

As a result of the iterative process, three marketing organizational cultures were identified and distinguished as belonging to the following categories. The first two categories represent the organizational culture levels of Schein's organizational model (1990, 1996): tacit assumptions, values and a third one showing how the core values are translated in practice.

Tacit assumptions: Long held beliefs about the core tasks and values of the organization and its employees within foreseeable time horizons.

Core values: Firmly adopted principles on how to respond pro-actively to these assumptions with grand marketing strategic initiatives.

Strategic practices: representing the "output" and manifested behaviors and practices of a specific culture.

In the light of these three categories, the study identified three main models for devising an organizational culture to manage a market orientation mechanism that capitalizes on students' evaluation as set out in Table 2.

Case A – Compromiser

Case A is a pioneer leading public business school that offers programs in English language and adopts international business curriculums and mechanism for using students' evaluation.

The implications of the tacit assumptions for market orientation; The assumption of the compromiser is that students can be considered as customers only in the programs where students pay market-based tuition fees and students' evaluation are conducted. This contingent approach of perceiving students as

customers is derived from their leading heritage of academic excellence accompanied by their social mandate, with its consequent monopolistic power. In contrast, in other programs where no formal evaluation by students is sought, the decision is due to the long standing monopolistic belief of the organization that students can never be customers. In such a situation, the employees – either academic faculty or administrative staff – of these fee-paying programs are not often oriented towards satisfying students. The compromiser's employees' orientation seems to depend on the power of the actors and other contingent circumstances. According to this unique approach to students as possible customers, the compromisers' perception of orientation towards profitability ranges from believing that 'students can be a source of profitability' to 'students should not be a source of profitability'.

Table 2**:** Management of Students' Evaluation: Evidence from Three Egyptian Business Schools A, B, and C

	Case A **Compromiser**	**Case B** **Globalizer**	**Case C** **Customizer**
Tacit assumptions	- The customer is always right if s/he is a customer	- The customer is always right as long as s/he is a global customer	- The customer is always right as long as s/he is profitable
Core values	(Make both ends meet)	(Look globally appease locally)	(Keep customers happy)
- Generation	- Interruptible (i.e., limited, circumstantial & prolonged)	- sustained (i.e., selective, influential & regular)	- perpetuated (i.e., comprehensive, dominant & continuous)
- Dissemination	- manipulated (i.e., information asymmetry, lean toward formal & action contingent)	- relevant (i.e., selective sharing, formal & loose action justified)	- overwhelming (i.e., all-sharing formal & cohesive action imposed)
- Response	- Unpredictable (i.e., stochastic, lagging & symbolic)	- Proportionate (i.e., indiscriminant, quick & effective)	indiscriminate (i.e., Selective, timely conducive)
Strategic Practices	- undifferentiated	- differentiated	- focused
- Line of Business	- order qualifier-quality	- order winner-quality	- tailored quality
- Resources	slack	upgraded	plentiful
- Perceptions of stakeholders	public image	global image	target market image
- Past performance	efficiency	effectiveness	adaptability

This table shows the three distinct organizational cultures (case A, case B, and case c) identified from analyzing the impact of organizational culture levels (i.e., tacit assumptions, core values, and strategic practices) on market orientation mechanisms that capitalize on students' evaluation. Each cell in the three cases' columns describes the organizational culture, the management of students' evaluation (i.e., how to generate, disseminate and respond to students' evaluation) and the implications of such culture.

The implications of the core values for market orientation. The generation of students' evaluation data is circumstantial. This means that market information generated from students' evaluation could be an important piece of market information for some programs, when socially and politically plausible, for different and changing generic purposes, and using standard templates of one methodology covering only a few aspects of the learning process. At the same time, the evaluation exercise may be merely to produce informal inputs from students for the sake of giving them a limited chance for self-expression.

'When we started doing students' evaluation for the English section, we did not have a clear agenda but just imitated the leading internationally-affiliated university in the Egyptian market. Later on, we found such evaluation to be effective in improving the quality of our educational services. This is why we seek to extend this tool to all our programs and make it more and more acceptable by stakeholders.' (Member of the school's faculty board) The dissemination of students' evaluation is manipulated; students' evaluation are disseminated to a few parties selectively on a sporadic basis without clear reasons that might be discussed formally or informally at the discretion of decision makers who could produce spontaneous actions. The response to students' evaluation can be described as unpredictable; response can

be made to only a few areas, on usually lagging and rarely sustainable bases, on the smallest possible scale and scope, with a highly centralized authority, and with almost no reporting of impact.

Strategic practices – top managements' policies for market orientation. The top management of the compromiser's institution perceives their role in the society as providing HE services to the upper and lower B class, in particular to those who deserve a chance of HE and usually cannot have it for various economic and social reasons. One of the top management leaders of Case A indicated that 'we seek to introduce an education service that appeals to the largest possible sectors of potential students.' Accordingly, the compromisers perceive their stakeholders to be composed of staff, governmental/professional and national accreditation bodies, students, parents and employers. 'We have been saying that the university is its staff and the state is our main beneficiary, to justify the de-optimizing of our students' agenda. Despite the crystal clear evidence that these fallacies were damaging even to the long term interests of the staff and the state, we still come under legislative, social, political and media pressures to keep on doing business as usual and this is why we send mixed signals to students.' (Undergraduate program director) It is in the light of this that the respondents' perceptions and identification of organizational resources to achieve strategic goals and performance control indicators or benchmarks are determined. They perceive the organizational resources needed to accomplish their mission and satisfy stakeholders should be made up of staff quality, government contacts, money, industry links and international contacts, whereas they believe that their performance indicators are in fact their public image, legal compliance, profitability and number of students.

Case B – Globalizer

Case B is a leading internationally affiliated business school. The globalizer has been the pioneering and acknowledged market leader in world class internationally accredited business education in Egypt for a century. The business school is both the branding star and the cash cow for the university. Its only serious competitors are another two booming private and public globalizer.

The implications of the tacit assumptions for market orientation. The globalizer defines students as important customers. Students are part of a large group of stakeholders. 'Here, the student is the boss. This does not mean that the student is allowed to manipulate the educational process but that the whole educational system is designed and run around his/her best interests. We recognize that there are other equally important stakeholders such as sponsors and employers but our world class experience and standards have taught us that when you pursue the best interest of that one pivotal stakeholder, you automatically optimize the objective function of all other stakeholders and the contrary is not true. We hold this world class definition of students' best interests even higher than students' delight, if we have to.' (Head of Department) 'This is rooted in the school's mission and educational object: to provide high quality education which matches international standards and helps to enhance superior opportunities for their graduates to be internationally employable.' (Head of Department)'We welcome students who are prepared to survive and capable of it despite the demands of our world class educational standards which help us enjoy a competitive edge in the global labor market.' (Dean)

Therefore, the employees are oriented towards satisfying their students' need to become distinctive graduates after a unique and rich learning experience. Consequently, they perceive students' tuition as a main source of the school's profitability but not as the sole source of its financial sustainability.

The implications of the core values for market orientation. The generation of students' evaluation data can be described as sustained; students' evaluation is an important source of market information that should be regularly generated for all programs at appropriate times for some specific purposes, using viable forms of structured methodology covering vital aspects. 'Students' evaluations are an embedded inheritance from international genesis and affiliation. We seek to capitalize on them to stay abreast of our global image. It takes a great deal of internal communication and decision mechanism to do so.' (Head of Department) The dissemination of information from students' evaluation is relevant in the sense that, information is disseminated to the pre-designated concerned parties at specific times for known reasons

and in appropriate forms. They are and always should be discussed on a regular and formal basis and some action is required from certain parties in response. The response to students' evaluation is proportional because the response is made to selected areas only on a reasonably and contingently basis and on a justified scale and scope. The response is made by regulated empowered staff to customers oriented to global standards, with a reporting impact for far-reaching and radical responses only.

Strategic practices – top management policies for market orientation. Since the globalizer is aiming to provide the highest quality education to international standards, it is targeting the affluent social classes: upper and middle A class, in addition to a limited number of talented students in other classes who are globally oriented and quality sensitive. It defines its line of business as a "specialty product seeking to claim a monopolized market" (Dean). Hence, it defines stakeholders as students and international image standards; parents and staff; and employers. Therefore, it believes that the resources needed to achieve its strategic mandate are international market contacts; international standard agencies; funds; staff quality; and governmental contacts. It measures its performance using international recognition, market image, profitability, customers' satisfaction index (CSI), and labor turnover.

Case C – Customizer: The customizer is the pioneering and unquestionable quality leader of the private Egyptian universities. The business school is the lifting star of the brand image with a notable profitability mandate through managing economies of scale with above-market fees. Its direct competitors include four public and private quality sensitive business schools.

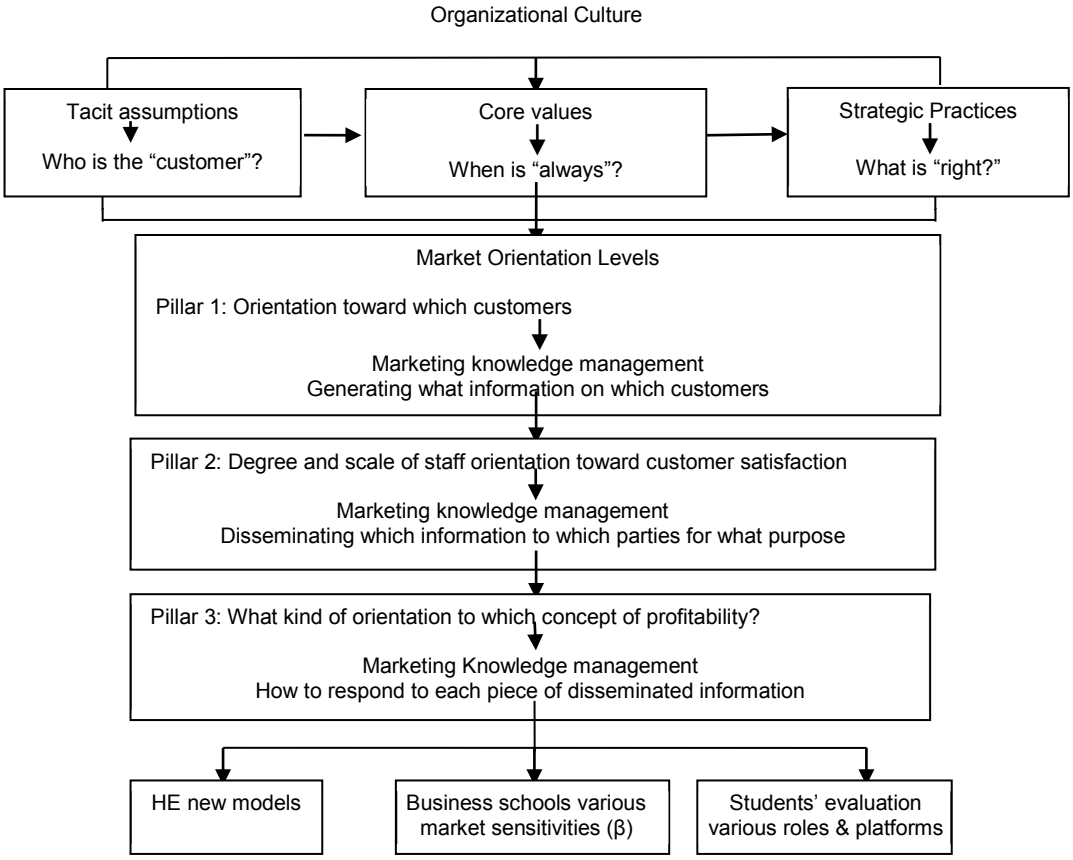
The implications of tacit assumptions for market orientation. The customizer assumes that students are the most important customer because it is operating in a very competitive market that is completely deregulated. This is derived from the customizer's main agenda to offer a competitive profitability level to shareholders. Hence, its employees, both academic faculty and administrative staff, are concerned to be totally oriented and exclusively dedicated to customers' (students') satisfaction.'When we hire staff (academics and administrators) we check not only on their specialized aptitudes but also on their attitudes, especially toward students. If we smell any polluted glimpse of the dogma that we are the masters and students are our slaves, we immediately turn such people down. Everyone working at this campus (including owners) must believe firmly that students are our key customers and quality is what they see as quality within tolerable legal and ethical standards' (Head of Department).

The implications of core values for market orientation. The generation of market information from students' evaluation can be described as perpetuated; market information generated by students' evaluation is the most important piece of market information that can be generated for all programs since its inception, for all kinds of purposes using all forms of available methodology and covering all aspects of the learning process. The dissemination of information from students' evaluation can be described as overwhelming; students' evaluation should be disseminated to all parties at all times for all possible reasons in all forms of analysis and should be discussed on an elaborate and deliberate basis in continuous and formal forums, after which some sort of action is expected from all parties. The response to students' evaluation can be described as indiscriminate in the sense that response to information generated by students' evaluation is defined as something which should be made to all areas on an immediate and sustainable basis with the largest possible magnitude and scope through fully empowered staff and customer-oriented governance', then its impact should be systematically reported. 'Student evaluation is the dogmatic creed for the way we run all our programs. We aim to know how the students feel day by day in so many mutually verifying methods and formally distributed to every academic and administrative sector inside the university, to address all the concerns raised with measurable and influential actions. Everyone is empowered and encouraged to react positively to students' concerns' (Dean).

Strategic practices – top management policies for market orientation. The customizer defines its line of business as providing high quality education to the upper B and lower A classes. They perceive it as providing shopping services in a monopoly market. 'We concentrate on the upper B class and lower A class students who are keen to get higher quality business education to manage their family businesses or join multinationals operating in Egypt' (Dean). Accordingly, the customizer assumes that the

stakeholders' group consists of students, parents, staff and national accreditation bodies. Moreover, it believes that the organizational resources needed in this line of business are money, staff, market contacts and governmental contacts. In line with its educational creed and organizational mission, it uses the following performance measures: number of students, overall profitability, customers' satisfaction index, and labor turnover.The foregoing grounded theory results have led to an empirically substantiated model as depicted in Figure 1. The model shows the implications of organizational culture for market orientation mechanisms that capitalize on students' evaluation. It also points out to the three following arguments concerned with answering the major question of whether the customer is always right.

Figure 1: The Emerging Grounded Theory-Based Framework



The figure shows the implications of organizational cultures for the pillars of market orientation and strategic practices of business schools

Argument 1. "Who" is the customer? Defining the customer depends on the organizations' assumptions about its market, viewed through the lens of its tacit assumptions as expressed by its organizational culture. Then, the organization uses its market orientation to generate information to an extent, which reflects its beliefs about the customers' identity and their importance in relation to other stakeholders.
This affects all the aspects of the generation of market information as to what agenda, which methodologies, and how far it extends are attached to each incident in the generation of market information.Conclusively, based on the organizational culture's contingent pursuit of customer orientation and its associated generation of marketing information, it can be safely claimed that various definitions and identifications of the same customers should be in use and there should be no one standard template way to generate information from these customers in essence, form, or even scope.The range is extremely wide, from ultimately prioritized customers to not being a customer at all and from the uninterrupted generation of information about the customer to there being no need to listen to customers all.

Argument 2. "When is Always?" The marketing organization's core values, determining how far the main staff should be oriented and dedicated toward customer satisfaction, are a major determinant of the extent to which the preparation, guidance and mentoring of the staff for this mandate is seen as an investment. Again, this depends on the tacit assumptions about the market and the context as interpreted and stated by the core values. Then, these values have a significant impact on the timing of assistance to the marketing generated information and the time and resources allocated to communicating this information to a specific range (number) of parties and the expectations about for each party is dealing with such information. Accordingly, the dissemination of information does not take one form of intensity, immediacy or crucialness. There are significant variations in the timeliness, scope and expected reactions for each flow of marketing generated information within the various constituencies of market orientation which are mainly guided by the core values of the organizational culture.

Argument 3. "What is right?" The core values as reflected by the strategic practices necessitate various response formats that are not essentially related to addressing customers' disseminated concerns to satisfy best the aspirations of the designated customers. This consideration was found to be largely contingent on the customer's position and importance in relation to other stakeholders (also identified by tacit assumptions) and communicated through core values. Equally important, the mode of response tends to vary across all the response dimensions (e.g., the areas, immediacy, magnitude and reporting of the impact of the response) according to the availability of organizational resources to respond, the lines of business related to the given customer and the relevance of customer driven performance benchmarks.

Conclusively, the response to customers' communicated demands is far from a uni-directional, one-sided phenomenon. It can move in various directions: from marketing organizations to customers, between various parties within the marketing organizations, from customers to the marketing organization and to a zero response with no direction at all. Eventually, it can be multi-sided, from totally espousing the side of the customer, or making a variously balanced response to both the side of the customer and the marketing organization, or making exactly a different point outside their equilibrium curve to actually going as far as responding against the customers' satisfaction either for her/his long/short term well-being, for business standards and norms and/or for branding considerations.

CONCLUSION

This paper aimed at revisiting the market orientation paradigm as it applies to the field of HE. Specifically, the paper focused on examining the market orientation mechanisms that capitalize on students' evaluation in Egyptian business schools. Due to the implicit and informal nature of the marketing phenomena under investigation, grounded theory methodology was adopted. The results indicate that the organizational culture has clear implications on how Egyptian business schools manage students' evaluation to enhance their market orientation. The results also suggest that there is not a simple and polarized application of the market orientation concept in Egyptian HE, but rather, there are nuances of the application of market orientation. This is largely because the organizational culture of the business school leads to different levels of the application of market orientation in terms of determining who the "customer" is, what is "right" and when is "always".These findings must be interpreted with some limitations in mind. First, the underlying dimensions of market orientation and a knowledge-based management were adopted in their common form, as advocated by Kohli and Jaworski (1990); there are other significant variations and additions to these commonly accepted understandings of market orientation that can also be adopted. Second, students are just one type of stakeholder and their evaluation is only one form of the marketing knowledge that they originate. Third, the HE field in Egypt is a single service industry operating in the cross-cultural context of a single country. Significant variations are very much expected in other service industries within other global markets. Extensions and replications of this research across various industries can be conducted with the same methodology

adopted and an even wider spectrum, relying on the analogy between students' evaluation and other customer-oriented market soundings, such as customers' complaints, reviews, testimonials, recorded sales and customer service calls and protocol analyses of customers' surveys.

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BIOGRAPHY

Abeer A. Mahrous is Assistant Professor of Marketing at Cairo University. She also serves as a marketing consultant for various organizations and leads many reform projects in the business schools sector in Egypt. Her research appears in journals such as *International Journal of Business Studies, International Journal of Electronic Marketing and Retailing* and *Journal of American Science.* She can be reached at Cairo University, Giza, Egypt, P.O. Box 12613, abeer.mahrous@gmail.com

Wael Kortam is Professor of Marketing, Department of Business Administration, Cairo University, Egypt. He has been actively involved in designing and implementing various internationalization, marketing and accreditation initiatives on national and global scopes. His research appears in journals such as *Journal of Consumer Marketing, Journal of American Science* and *Marketing Intelligence and Planning.* He can be reached at Cairo University, Giza, Egypt, P.O. Box 12613, wakortam@gmail.com

THE DYNAMICS OF ACCELERATED LEARNING

Joan Marques, Woodbury University

ABSTRACT

As accelerated programs are maturing in higher education, and populations of non-traditional learners are soaring nationwide as well as internationally, there is still quite some ambiguity regarding the rigor and validity of these programs. Opposing sounds mainly come from full time faculty, and administrators, due to insufficient familiarity with the different teaching concepts that intensive formats require, and erroneous perceptions about student populations in general. This paper examines the reasons for the continuing growth of accelerated programs in higher education, reviews the main concerns as well as the main advantages of intensive course formats, and presents some important prerequisites and considerations for successful teaching in these courses.

JEL: I23

KEY WORDS: accelerated programs, intensive formats, academic rigor, andragogy, situational leadership, non-traditional student populations, adult learners

INTRODUCTION

Accelerated learning can be defined in multiple ways. Imel (2002) defines it as a multidimensional approach to learning with the learner placed at the center of the experience. Boyd (2007) specifies that accelerated learning pertains to a learning format in which students are enabled to take courses and earn credits in a shorter period of time, compared to a traditional semester format. Boyd subsequently clarifies that teaching in accelerated programs requires different approaches as teaching in a traditional semester format.

Accelerated programs have been around for about 40 years now. The trend of including this format in higher education has grown at a stunning pace. Today, adult learners form about 80% of the student population in higher education. Wlodkowski (2003) explains that accelerated programs are among the fastest-growing transformations in higher education. He points out that these programs challenge the status quo, because they redefine the very roots of academic structures, from content and numbers of instruction hours, to the need for faculty tenure. Wlodkowski adds that most accelerated programs are offered by traditional institutions that have decided to serve the ever-growing population of working adults in the college classroom.

Nonetheless, the challenges are far from over for accelerated programs. Educators tenaciously hold on to their perspectives, which are either strongly advocating or strongly disapproving intensive formats. While, on the upside this continuing difference in perspectives stimulates ongoing scrutiny and incessant strengthening of this format, the degree of best practice sharing among those involved in facilitating intensive formats seems to decelerate. In addition, accelerated programs still suffer from substandard treatment in academe. Marques (2005), for instance, reports on a NACADA (National Academic Advising Association) conference where less than 3 percent of the workshops were focused on advising adult learners. This insufficient attention to adult education at the practical level may be a major contributor to the criticism from faculty and institutional administrators, as they lack in-depth awareness of proper approaches toward this massive student community.

Inspired by the ongoing hesitance and sometimes radical aversion of many full time educators in higher education toward intensive formats, the author of this paper, also a college instructor, engaged in

extensive literature review to find answers to a number of recurring questions about accelerated formats, such as their purpose, the trend around them, concerns and advantages, strategies for success, and rigor. The remainder of this paper consists of the literature review addressing these issues, a review of the dynamics of accelerated learning, captured in a figure, and some concluding comments.

LITERATURE REVIEW

The Accelerated Pace of Work

It is common knowledge today that the pace of corporate change has arrived at a point where business organizations feel pressured to accelerate their activities in numbers as well as in speed, increase performance measures but decrease innovation cycles, and continuously consider management and organizational systemic advancements (Bruch & Menges, 2010). Bruch and Menges explain that being subject to constant change requires employees in contemporary workplaces to look for ways in which they can effectively deal with overloads of activities. Now that acceleration has become the new normal, Bruch and Menges recommend three rigorous steps toward preventing employee burnout and organizational crises: 1) reformulating priorities, so that employees can focus only on the real important issues; 2) reconsidering performance goals, abandoning second-rate actions, and solely focusing on actions and processes that are important to the organization; and 3) Narrowing down the focus to one thing at the time, with short revitalizing pauses in between. Bruch and Menges (2010) assert that a critical screening of activities can lead to eliminating large percentages of unimportant tasks that negatively affect overall performance. These authors have found that corporations, which limited their focus to one activity at the time enabled employees to perform faster at those activities, while slowing down in between. This led to greater output and enhanced senses of accomplishment. The trends and responses that Bruch and Menges describe above are occurring in higher education as well. There is less time to allot to unnecessary details, and the demand for accelerated programs is soaring.

Hoover, Giambatista, Sorenson, and Bommer (2010) agree that corporations increasingly question the effectiveness and relevancy of business education. According to Hoover et. al, the concerns pertain to an excessive focus on theories and a lack of behavioral and experiential practices. These authors point out that business recruiters are particularly focusing on communication and interpersonal skills, team skills, and problem solving skills in applicants. This focus from the corporate world makes intensive learning formats a fertile foundation for workplace performance.

Collins (2005) points out that employers are important stakeholders of universities, who expect that today's college graduates should have obtained more than just content information. Collins (2005) further explains employers' expectations about college education: "It must assist [students] in developing ways to process information, evaluate objectively, control for own bias, create a solution or new knowledge, and analyze the outcome (p. 174). Collins stresses that in today's complex world of work, universities have the responsibility to assist students in developing more complex ways of thinking, so that they will properly meet the demands of contemporary workplaces and society. Intensive programs were developed to be more practical and are in foundation more in tune with the demands of the workplace.

A Growing Population of Adult Learners

Intensive course formats are not only offered for business majors, but surface in all academic disciplines. As an example, Beal (2007) reports that between 1971 and 2007, 197 accelerated baccalaureate degree programs in nursing were launched, with 37 more in planning stage. Aside from the pressures from the ever-accelerating paces in business performance, Scott (1993), Daniel (2000), and Collins (2005) report that the soaring trend of intensive formats should be ascribed to the growing number of non-traditional students in higher education. Scott confirms that between 1970 and 1985, the adult student population

grew with 140%, leading to 42% of non-traditional learners in higher education in 1993. Daniel (2000) presents more recent data from the National Center for Education Statistics and the Department of Agriculture, which reveal that about half of the US college population is 25 years or older, a trend that has increased by 50% percent in the past three decades. In addition, Daniel avers that the number of part-time students has also increased tremendously. Marques and Luna (2005) offer a comprehensive reason for the growth of the part-time student population. Based on their experiences as advisors and faculty, they have noted that not only experienced adults experience the time pressure toward accelerated progress, but students in the so-called traditional formats as well. Marques and Luna present the phenomenon of a "mixed educational society" (par. 7), gravitating to accelerated learning formats. This mixed society consists of experienced working adults, younger working adults, and "traditional" students. Daniel (2000) predicts that, based on this augmenting trend, it can be expected that more and more higher education institutions will offer intensive course formats at non-traditional times, such as evenings, weekends, and summers. She affirms that 217 out of 424 surveyed colleges and universities were including intensive course formats. Daniel's findings date back to the year 2000, and since then the pace has only increased. To confirm this, Wlodkowski and Kasworm (2003) present the stunning 2002 data from the National Center for Education Statistics: "Seventy-three percent of all college students today are nontraditional learners" (p. 94). Focusing on a particular college that has expanded its accelerated program, Spaid and Duff (2009) report that Mount Olive College in North Carolina has witnessed an average enrollment increase of 12% each year over the last four years in a time where traditional enrollment is decreasing. They specify, "Eighty percent of the students enrolled are working adults pursuing a degree through an accelerated cohort program" (p. 104).

Accelerated learning programs are not limited to the United States. Wlodkowski (2003) mentions Puerto Rico, the Philippines, Ireland, Germany, and Australia, as examples of countries that have also been early contenders in this new trend. Wlodkowski and Kasworm (2003) aver that the majority of non-traditional learners can be found in the areas of business management, teacher education, and computer science. The next sections will provide some general facts, perceived concerns, and advantages of accelerated programs.

Some General Facts about Accelerated Courses

There is a general misnomer that accelerated courses are normal courses, squeezed in a compact format, which basically entails that there is no change in approach, just an increase of speed with the same structure. Authors such as Wlodkowski and Kasworm, 2003; Swenson, 2003; Daniel, 2000; Scott, 1993, and many others, explain that the most essential strategy in these courses is to shift from lecturing to facilitating. In other words, engaging in an accelerated course format requires a paradigm shift for instructors as well as students. The awareness levels toward their mutual responsibilities need to be heightened. In these courses, there should be great interaction, significant self-learning, and increased responsibility. Swenson (2003) explains that learning is, in fact, individual and situational, meaning that each person learns in his or her own way, and in context with his or her environment and experiences. The traditional notion of group learning through extensive in-class seating time is therefore a flawed one. Swenson (2003) warns that teaching formats and structures are not a guarantee for success.

"A learner's preferred learning style, dominant perceptual mode, role, motivation, interest in the subject matter, and other variables combine to make every individual learning transaction a universe of one" (Swenson, 2003, p. 84). What a teacher teaches in class and what a student learns are not necessarily the same thing. Students don't learn on command. However, there is a better change to motivate them to learn when they are invited to reflect and share their perspectives.

In the course of the 30 years that accelerated programs have been around, some general traits of students in this type of program have been identified. Beal (2007) presents a concise but clear assessment for

accelerated nursing students, which accurately befits the general profile of students in accelerated courses: a) These students are generally older, in steady relationships, and oftentimes also working outside of school; b) They are highly motivated, bring valuable insights and experiences to the classroom, and often challenge traditional ways of thinking, and c) Based on their higher degree of maturity and greater motivation, they generally score higher than traditional students, particularly in areas that require critical thinking.

Collins (2005) explains that the aspect of critical thinking is one of the foundational elements of intensive courses. Because these non-traditional students can be rather challenging in the classroom, which can lead to heated debates, some educators prefer them, while others prefer traditional formats.

Disadvantages of Accelerated Courses

There is an interesting dynamic at play when it comes to intensive course formats: students generally love them, while faculty struggle with mixed feelings, and are often hesitant in acknowledging the validity of these courses. Scott (1993), Daniel (2000), and Wlodkowski (2003) address this concern from multiple angles. Scott (1993) identifies the two most frequently mentioned faculty concerns: 1) lowering academic standards to meet time constraints, and 2) lack of clarity on how to structure intensive courses differently than traditional ones. Scott's first point should also be perceived in light of pressures to lower standards so that a competitive advantage can be established or maintained over similar programs at other institutions. This is further underscored by Wlodkowski (2003), who lists some common, competition geared criticisms from faculty, such as prioritizing convenience over substance, perceived unfeasibility of covering required content in less time, infringement of educational consistency, crammed and poorly developed learning, and the referral of this alleged "inferior" format as "'McEducation' and 'Drive-Thru U'" (p. 7), due to its fast pace.

Daniel (2000) adds an additional common faculty concern that some topics are just not suitable for accelerated formats. Yet, states Daniel, comparisons between test scores in accelerated versus traditional formats have defied this concern, as the students in the non-traditional formats scored similar to those in the traditional ones. Reviewing a number of studies on the topic, Daniel stresses that students in intensive formats seem to retain more or the same amount of information as traditional course students after the courses are over. However, there seems to be ambiguity in perspectives on success rates and achievability of courses that entail quantitative components: while some categorically discard the possibility of offering these courses in intensive formats, there are others who claim that they have had consistent success with the implementation of these topics in accelerated courses. Davies (2006), for instance, feels that any course can be taught in an accelerated format, as long as the curriculum and teaching methods are designed for such a format, and Adams, Gearhart, Miller and Roberts (2009), as well as Carlson and Lipka (2009), support Davis' contention by reporting on noted successes with the new approach of offering basic writing courses in accelerated format: improved student performance, greater motivation and higher retention rates, faster completion, and lower overall costs.

Another concern to be addressed is the narrower margin of error in accelerated courses compared to traditional courses. Due to the condensed format of the program, the quality of course instruction and achievement of learning outcomes needs to be monitored regularly (Wlodkowski & Kasworm, 2003). Students who don't possess a high level of self-regulation skills should not be allowed in this program. In addition, there needs to be well-constructed assessment on retention, level consistency, grading, and content, stress Wlodkowski and Kasworm, as these programs are usually considered cash cows and can therefore easily be abused.

Kasworm (2003) presents a final concern that was mentioned earlier in this paper, but should be readdressed here as an important reason for faculty concern about intensive formats. She clarifies that

accelerated programs, due to their practical nature, have instigated a radical overhaul of conventional education, whereby professionally qualified faculty, mostly adjuncts, turn out to be more suitable for the heavily real-world oriented student population in accelerated courses. There is, hence, a threat factor captured in this argument that tenure and other conventional academic structures may become obsolete if these courses continue to demand a more prominent place in university curricula. Interestingly, Seamon's (2004) article radiates exactly this sentiment, as he attempts to defy the claims that accelerated courses in psychology are considered superior compared to those offered in the traditional format. Seamon's measures over a three-year period found that accelerated courses were considered either better or similar in affinity for learning. Based on his findings, Seamon predicts that the initially perceived superiority of accelerated courses will either fade or remain stationary.

Advantages of Accelerated Courses

The most obvious advantages of accelerated courses were interwoven in the concerns above: shorter course seating time and a faster pace toward degree completion, a more to-the-point approach and greater attunement into real-world preparedness. However, there are some deeper and more specific advantages to intensive formats, such as Wlodkowski's (2003) assertion that multiple comparative studies between the level and depth of learning between students in traditional courses and those in accelerated courses have suggested "that accelerated courses provide levels of learning indistinguishable from or greater than those demonstrated by the younger students in conventional courses" (p. 8).

Lee and Horfsall (2010) posit that there are advantages for multiple stakeholders, and mention the financial windfall for the universities, fulfillment of the call for more flexibility from students, and greater compatibility with overseas university calendars. Their study yielded additional student and faculty identified advantages such as an increased sense of community among students, greater frequency of feedback, and greater opportunity to focus on a single topic.

Several studies (Scott, 1993; Conrad, 1996, Lee & Horfsall, 2010; Kucsera & Zimmaro, 2010) found that, given a specific set of prerequisites, to be presented in more depth in the next section, these courses are regarded rewarding and powerful learning experiences by all constituents. In a comparative study of accelerated and traditional courses across multiple departments, Kucsera and Zimmaro (2010), for instance, found that for both formats instructor ratings were rather consistent, but that course ratings differed markedly, with intensive formats clearly in the lead. Based on their findings, Kucsera and Zimmaro assert, "These findings provide further evidence that negative beliefs concerning intensive courses may be unjustified, and intensive courses may be as or more effective than those presented in traditional formats" (p. 62). They further state, "These findings support prior research that has found equivalent—and at times superior—learning outcomes from intensive courses" (p. 66). Agreeing with Kucsera and Zimmaro's findings is Johnson (2009), who presents the results of a qualitative research in which she interviewed 18 faculty members teaching in accelerated formats. The study focused on the effects of reduced seat time in their courses. A majority of the interviewed faculty members stressed that the reduced seat time was not an impediment to the quality and depth of their courses. These faculty members referred to increased responsibility from course participants, the low tolerance on absences, the high level of out-of-class preparation, and the greater focus from both students and instructors on the course topic. Johnson (2009), who audited some of these courses for a firsthand experience, stressed the high interaction she observed. Students came in highly prepared, with questions, and demonstrated thus that they had allotted significant time to the course material outside of class. As a result of her study, Johnson (2009) affirms, "The findings challenge critics who believe the accelerated delivery format compromises academic quality" (p. 149).

Spaid and Duff (2009) identify two important advantages of students in accelerated courses: 1) individual student development, and 2) group development. Specifically referring to the cohort format, Spaid and

Duff emphasize, "Cohorts must be purposefully formed and structured to evolve into cohesive working groups. Targeted development of a cohort is crucial if the students are going to persevere to graduation" (p. 104).

A PATH FOR THE FUTURE

In order to ensure greater alignment between higher education and the needs of employers in the future, some important issues will have to be addressed in accelerated programs. Daniel (2000) emphasizes that, in order to ensure greater success and increased student satisfaction, faculty should include strategies that may be different from traditional formats. She thereby refers to instructor's organization and pre-course preparation, including timely syllabus distribution, a creative variety of methods and approaches, and clearly defined course outcomes. Scott (1993) interviewed college instructors and students in English and Marketing, and arrived at the following prerequisites for intensive course formats: a) Attitudes toward the course: instructors as well as students maintained an entirely different attitude toward accelerated courses than they did toward traditional ones, not only regarding the context, but also in their approach to course content. Overall, there was greater creativity in knowledge dissemination, less redundancy, and more interaction; b) Mental investment and commitment: Instructors and students agreed that intensive course formats required more mental investment and commitment, which they felt was lacking in semester long courses, and c) No absences: the fact that there is a zero tolerance for absences in these courses also serves as a major motivator for students to invest more effort in these courses.

Based on the prerequisites above, Scott (1993) presents the following eight results in intensive course formats: 1) More concentrated/focused learning: instructors as well as students felt that accelerated courses engendered a continuous learning experience due to the concentrated format; 2) More in-depth participation: Due to the longer class sessions, instructors and students explained that they could engage in more in-depth discussion and classroom interaction; 3) Improved performance: Instructors and students felt that intensive formats encouraged improved performance, for a number of reasons, such as the greater concentration possibilities and the shorter duration of the course; 4) Less procrastination: Given the nature of these courses, procrastination is not possible, hence, not performed; 5) Greater stress: due to the higher concentration, the stress levels are higher, but not necessarily perceived as a negative aspect; 6) No superfluous material: Due to the short format of these courses, instructors stay the course, and get rid of unnecessary details; 7) Positive effect on future performance: students declared having learned more about themselves in the intensive course formats, having increased their sense of self-esteem, and felt better capable of undertaking future challenges, and 8) Greater student interaction: Students explained that intensive formats encouraged a greater sense of togetherness among them, due to the high pace and the frequency of team performance.

In her conclusion, Scott states, "I came to understand from students, instructors, and my own observations, that intensive courses yield qualitatively different learning experiences than semester-long courses, but the quality of those experiences depends on the presence or absence of certain attributes" (p. 436). As important "attributes" Scott (1993) lists: instructor's approach, application of diversified teaching methods, the overall in-class environment, and the quality of the learning experience, with a focus from the instructor to create meaningful assignments and not just try to test knowledge.

In an analysis of a 2002 survey among students and faculty in accelerated programs, who had also experienced traditional formats, Poellnitz (2007) interestingly found exactly the opposite of Scott's findings: faculty members were positive about the accelerated format, and students were positive about faculty, but a majority percentage of students felt that the accelerated format was more demanding thus more stressful, and that the traditional format was more conducive to their learning due to more organized and understandable course material. However, Poellnitz' conclusions are based on comments from 20% of the surveyed population. Of this 20%, 58% maintained that they preferred the traditional format, which

is an overall of 11.6%. This might be too narrow a basis to generalize the findings, particularly since Poellnitz' findings are so different from all other studies.

Horfsall and Lee (2010), for instance, agree with Scott's assertions. Discussing their findings from interviews with faculty and students in accelerated courses in Australia, Horfsall and Lee assert, "From both faculty and student responses, findings indicated that the benefits of acceleration for learning rested largely on an intensified, active learning cycle of theory, practice, and feedback and a stronger social learning experience derived from peer support, guidance and feedback" (p. 196).

Wlodkowski and Kasworm (2003) concur that the lecture method of teaching does not work too well in intensive formats. Rather, they recommend that, given the general features and structure of these courses, instructors should adhere to an "active learning method of teaching" (p. 94). Collins (2005) maintains that assignments in accelerated courses need to require students to reflect, and that small group assignments should be included to prepare students to the work-based reality of dealing with different opinions and ideas. Wlodkowski and Kasworm (2003) further lay out some critical conditions:

> "… trying flexible schedules instead of fifty-minute classes in the daytime; respecting adult experience as a means to inform teaching and research rather than vice versa; using adjunct faculty from the workforce as the main conduit of learning rather than full-time faculty housed at a university; and embracing new technology for teaching rather than shunning it as bothersome and unnecessary" (p. 94).

Accelerated Learning Formats and Andragogy

The findings and statements of researchers such as Swenson, Wlodkowski, Kasworm, Collins, Scott, Horfsall and Lee, Daniel, Johnson, Kucsera and Zimmaro, Beal, Davies and others, are well aligned to the concept of "andragogy," which entails "the teaching of adults" versus "pedagogy," which pertains to the teaching of children. Knowles, Holton and Swanson's (1998) stress the importance for educators of younger and older adults to seriously consider and apply the andragogical principles instead of the pedagogical ones. The difference between these two styles is simply facilitating versus lecturing. In case of adult learners, whether young or old, the facilitation technique works much better, as it encourages all participants to reflect, implement, and share their learning. Lecturing, on the other hand, is often compared to bank deposits: lecturers make deposits without expecting any feedback or challenge. Knowles et. al. (1998) explain that andragogy considers six focus points: 1) The need to know, which should be clearly explained to adult learners; 2) The learner's self-concept: this is often shaped by the way he or she is treated; 3) Encouraging students to integrate their work and life experiences in their learning; 4) Readiness to learn. Adult learners have made a conscious choice to be in school: they have a readiness to learn, which should be stimulated through interesting course strategies; 5) Orientation to learning. Most adults learn best when new information is presented in real-life context; and 6) Motivation is greater when students are given responsibility and ownership.

Marques (2006) recommends the andragogical concept in college courses with inclusion of, a) an approach of openness to reduce teacher-student barriers; b) multiple feedback options; c) making it contemporary and reflective; d) encouraging student input in the course structure; and e) Creating submission options for exams and tests.

Intensive learning formats were developed on basis of enabling each individual to engage in increased self-learning while using the reduced in-class sessions to share insights, dialogue about perspectives, thus learning from one another in the presence of a course facilitator (the instructor). Swenson (2003) recommends three checkpoints for educators when engaging in accelerated courses: 1) Create room for

students to actively engage in their own learning; 2) Enable ways for the student to include reflections of life and work in the process, and 3) Ensure sufficient time for reflection.

Kasworm (2003) adds, "Unlike undergraduate higher educator beliefs of a learning model based on young adults' limited maturity and understandings, adult accelerated degree programs represent a new mental model of learning, grounded in adult maturity and responsible engagement in the world beyond the classroom" (p. 27). She stresses that accelerated programs offer an effective combination of program structure and learning design geared toward actions, work identity, and competence of today's adult learners.

An interesting illustration of Kasworm's statements can be found in Armstrong's (2007) and Manjounes' (2010) doctoral dissertation studies. Armstrong's study, which specifically focused on accelerated MBA programs, concluded that students mainly enroll in these accelerated programs for extrinsic reasons, but while these were met, they ultimately felt that they found even more intrinsic gratification by going through the program. Also examining the experiences of the employers of these MBA graduates, Armstrong (2007) found that these were satisfied with the results and felt that their employees had obtained greater knowledge and skills that prepared them for advancement in their workplace. Manjounes' study, which specifically focused on accelerated undergraduate programs, found that these formats positively affected retention rates, especially when some important internal and external factors were addressed. The internal factors involved a good relationship and a high level of mutual trust and respect between instructors and students. The external factors included financial concerns, positively challenging academic requirements, and perceived advantage of their education to their career prospects and self-efficacy. Figure 1 presents the dynamics of accelerated learning, as discussed in this paper.

Explaining the Figure

Section 1 represents the three populations that make up the non-traditional learning community. Section 2 depicts the three drivers for the intensive or accelerated learning format. Section 3 presents the dual interpretation of accelerated learning: a) time based – pertaining to the reduced timeframe, and b) format based, with strategies intended to enhance (accelerate) the learning process. Section 4 captures the two opinion groups toward accelerated learning, mainly consisting of faculty and college administrators. The advocates consider this format an enhancement to learning, based on andragogical principles. The opponents claim a dilution of standards by offering semester based material in shorter timeframes. Section 5 highlights the concerns and advantages of accelerated courses, as extracted from existing literature. Section 6 embodies the most important aspect in making accelerated courses successful: attitude, and subsequently, the approach toward the program. Section 7 portrays the results from a constructive attitudinal shift toward accelerated formats. Section 8 reveals the teaching strategies that have been registered as the success guarantors in accelerated courses.

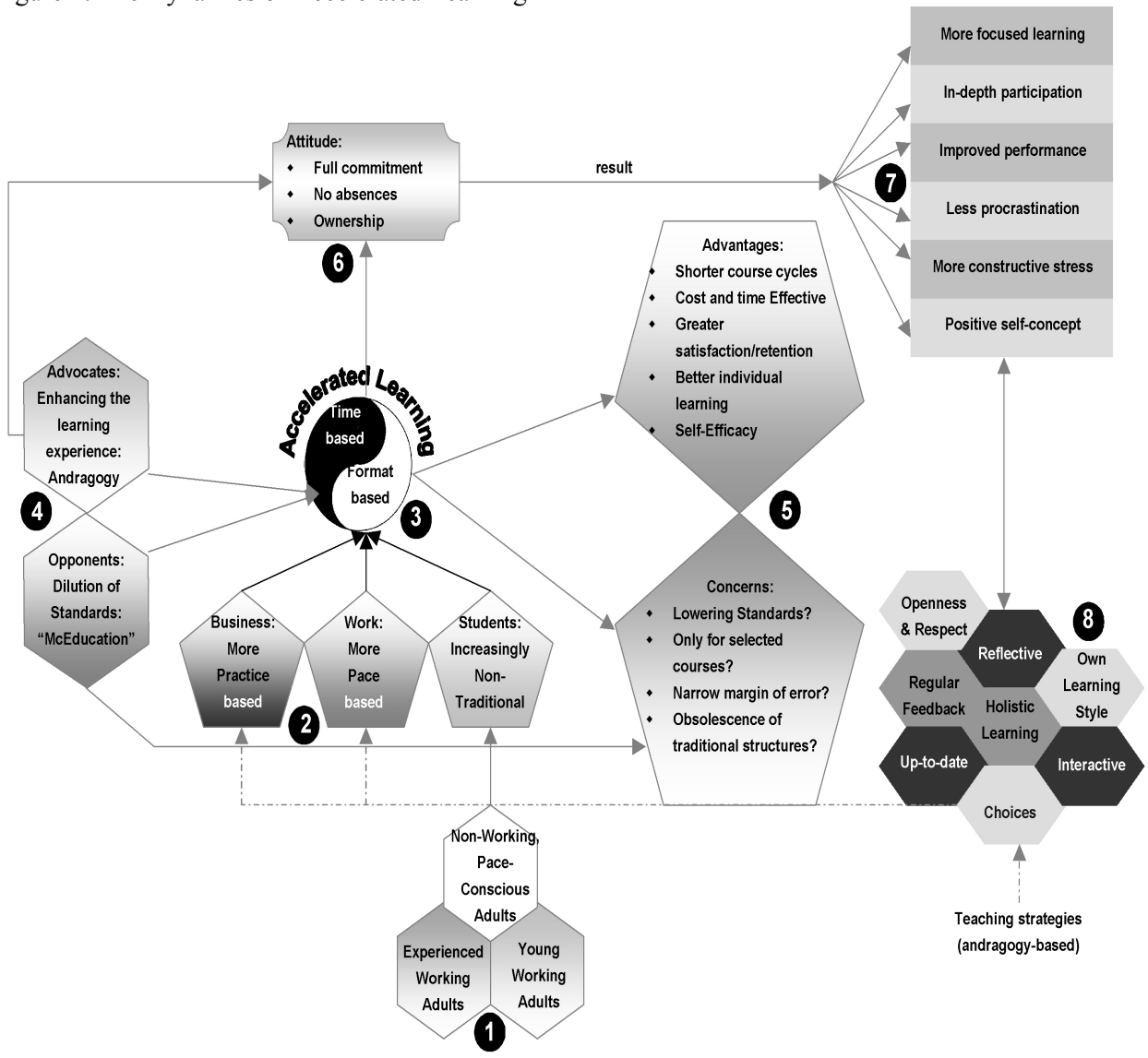
CONCLUDING COMMENTS

The purpose of this paper was to address, through extensive literature review, the ongoing hesitance and sometimes radical aversion of many full time educators in higher education toward intensive formats, specifically their purpose, the trend around them, concerns and advantages, strategies for success, and rigor.

This study found that accelerated education is still a growing trend, and that its success rate strongly depends on the approach from instructors. Given the andragogical concept, a facilitative rather than a teaching approach should be utilized. Furthermore, accelerated programs will require regular and close monitoring to prevent dilution. However, when well-managed, these programs lead to greater gratification and a more rewarding learning experience for both students and course facilitators.

While there are still mixed feelings about this format, it has become apparent that accelerated courses in higher education are not likely to disappear. It seems to be quite the contrary: everything points in exactly the opposite direction: a) As business corporations keep complaining about too much theory and too little practice in business education (Hoover, Giambatista, Sorenson, & Bommer, 2010), conscious efforts are implemented to narrow the gap that causes so much dissatisfaction; b) As the pace of work output is accelerating, and creative strategies are called for to reinvent the nature of work, non-traditional learning formats seem to be the most appropriate form of preparing near-future workforce members for success; c) As more and more workforce members return to school and more and more youngsters seek to combine their post-high school jobs with further education, non-traditional formats seem to be their best and most desired option.

Figure 1: The Dynamics of Accelerated Learning



Yet, this article also brought some important concerns to the surface: there is still a significant degree of hesitation or even aversion toward accelerated learning programs, particularly from full time instructors. This attitude can have multiple reasons. One is that accelerated programs, being as practice oriented as

they are, seem to benefit more from adjunct faculty members with full time involvement in the profession about which they teach. Full time faculty could perceive this as a threat. Yet, there is also the issue of unfamiliarity with what it takes to make this format work, and resentment to teach during evenings and weekends. Many educators lack proper preparation in dealing with multiple learning populations, and often lack skills and awareness to apply situational techniques to more mature populations. This lack of insight should be seriously addressed, if intensive format offering higher education institutions, of which Business Schools are a large part, want to deliver satisfied graduates with solid foundations to the future workforce.

Based on an abundance of literature, this article has also established that accelerated programs are definitely not inferior in educational rigor (see section "*Concerns about Accelerated Courses*"). The many studies cited in this paper attest to the fact that extensive research has been done, and that findings point in exactly the opposite direction, namely, that accelerated programs usually deliver better prepared and more aware graduates. To assist in a more proper approach toward this new "normal," this article has suggested some success strategies from instructors for improving the intensive format experience.

An important limitation to this paper is the fact that the data is based on existing literature, and not on primary data. While this was purposely implemented, to acquire a broad view on the standing of accelerated programs, it still represents a concern, due to the fact that authors from other works may have had different priorities in attaining their data.

Future research could engage in direct data generation from a series of higher educational institutions applying accelerated courses, in order to compare their experiences. Future researches could also consider expanding their focus on strategies that work, as well as ongoing shifts in student populations, from a majority traditional format to a majority non-traditional format.

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BIOGRAPHY

Dr. Joan Marques is director of the BBA Program and faculty of management at Woodbury University's School of Business in Burbank, CA. She teaches courses in Ethical Leadership and Organizational Behavior. She holds a B.Sc. in Business Economics from MOC (Suriname), an MBA from Woodbury University; and a Doctorate in Organizational Leadership from Pepperdine University. She has been widely published in scholarly and popular journals and has authored/co-authored nine books. Her current study interests pertain to Buddhist psychology in the workplace, and awakened leadership.

A STRUCTURED PEDAGOGY FOR INTEGRATING GENERALIZED AUDIT SOFTWARE INTO THE AUDITING CURRICULUM

Nirosh Kuruppu, Sultan Qaboos University

ABSTRACT

The usefulness of generalized audit software in increasing both the efficiency and effectiveness of audits has been well recognized. Consequently, there has been an increasing trend especially during the past five years towards incorporating audit software into the chapters of many of the mainstream textbooks on auditing. Consistent with this trend, changes have been made to the auditing curriculums of many business schools. However, precious little guidance is available to instructors on how to best incorporate and introduce students to generalized audit software as part of the auditing curriculum. This paper attempts to fill this gap by delineating a tested pedagogy that has been successfully implemented at an AACSB accredited business school for introducing students to generalized audit software.

JEL: M400; M420; I290, C880

KEYWORDS: generalized audit software, computer-assisted auditing techniques, audit command language (ACL), auditing curriculum

INTRODUCTION

The effectiveness of computer aided audit techniques in the conduct of audits has been recognized by regulatory bodies and accounting practitioners (Debreceny et al., 2005; Weidenmier and Ramamoorti, 2006; Brennan, 2008; Baker, 2009). This has consequently led to changes in both the curriculum and the methods of teaching auditing courses, with many business schools actively promoting the integration of audit software into the auditing curriculum. However, despite the current emphasis in integrating audit software as part of the undergraduate auditing curriculum, precious little has been done to identify the instructional strategies that can be used to enhance its delivery by faculty, and thereby improve the learning experience of students.

The objective of this paper is therefore twofold: first, to give practical insights into how to integrate auditing software into the auditing curriculum, and second, to provide a series of exercises that will reinforce in students the key elements of the functionality and usage of the auditing software. The methodology outlined in this paper has been successfully implemented for the past four years at an AACSB accredited business school in introducing students to auditing software as part of its auditing curriculum. This paper will be of interest to accounting academics in appreciating the more effective means and methods of integrating audit software into the classroom, which is especially so for faculty considering the adaption of such software for the first time.

The remainder of the paper is structured as follows. The next section reviews the extant literature in the area and the objective of this paper. This is followed by section three, which details the pedagogy for introducing generalized audit software to students using ACL™, together with key teaching points that can assist in its more effective delivery in the classroom. Section four concludes the paper with a summary and opportunities for further research.

BACKGROUND AND LITERATURE REVIEW

With the increased prevalence and reliance on information technology by organizations, there has been considerable interest in information technologies that can assist auditors in conducting more efficient and effective audits. In the current tough economic climate with audit firms facing considerable pressure to be as efficient as possible, technology based audit techniques are seen as an effective way to expedite and maximise audit efforts significantly (Baker, 2009; IIARF, 2009). The technologies available to the auditor range from continuous audit management programs such as Approva® and AutoAudit® to other computer assisted auditing techniques in the form of generalized audit software such as ACL™ and IDEA® (Brennan, 2008; Baker, 2009; IIARF, 2009).

It is therefore imperative that auditors become familiar with current developments in IT based audit tools to fully harness their potential as a means towards increasing audit efficiency. However, there is currently a considerable shortage of well-trained accounting graduates with the requisite IT knowledge (O'Donnell and Moore, 2005). This has led some large accounting firms to cross-train current staff in information technology, and has encouraged audit firms to provide relevant IT related training to their staff (Debreceny et al., 2005; O'Donnell and Moore, 2005; Weidenmier and Ramamoorti, 2006; Baker, 2009). Audit firms are now, as a result, increasingly providing training on the use of computer assisted auditing techniques (CAATs) to their employees. CAATs can improve the productivity and efficiency of audits, and generalized audit software are one of the most commonly used forms of CAATs (Debreceby et al., 2005; Weidenmier and Ramamoorti, 2006; Baker, 2009). These techniques can reduce the time taken to complete the audit, and therefore, the cost of the audit (Brennan, 2008; IIARF, 2009). Furthermore, it enables the auditor to increase audit coverage by performing a more comprehensive audit, such as when the entire population can be tested effortlessly without having to resort to sampling (Lanza, 1998; Baker, 2009; IIARF, 2009).

Given the value and usefulness of information technologies in the form of CAATs in conducting more efficient and effective audits, there is an increasing demand for accounting graduates who are familiar with CAATs (Weidenmier and Herron, 2004; and Sharifi, 2004; O'Donnell and Moore, 2005). It is therefore essential that efforts are taken to integrate CAATs into the auditing curriculum, and business schools have been asked to help in this effort by producing accounting graduates who are capable of meeting the demands of employers (Weidenmier and Herron, 2004; and Sharifi, 2004; O'Donnell and Moore, 2005). To achieve the latter objective, computer-based learning, which is a subset of e-learning is especially appropriate due to the significance of the information technology content inherent in CAATs. E-learning strategies includes instruction delivered via a computer either led by an instructor or even self-paced learning (Bates and Poole, 2003; OECD, 2005; Clark and Mayer, 2007). This view is further supported by Bates (2009) who asserts that a major argument for e-learning pedagogies is that it enables the development of essential skills and competencies required by a profession or discipline by incorporating information technologies within the curriculum.

Consequently, a number of mainstream auditing textbooks over the past five years have responded to accounting firms' need for graduates with specific IT skills by integrating generalized audit software into the content of their texts through the use of computer based learning. These include the popular auditing textbooks by Arens, Messier, Rittenburg and Louwers. Integrating auditing software into the respective texts in this manner is expected to improve students' learning experience by exposing them to computer based methods used by auditors in the modern audit environment, which is a critical skill. It is also expected to make students' with skills in CAATs more marketable to potential employers (O'Donnell and Moore, 2005; Baker, 2009).

Although the necessity of developing specific training programs in IT for auditors is recognised by prior research, only a very limited number of studies have looked into the effective pedagogies for introducing

audit software as part of the auditing curriculum, as employers have requested (O'Donnell and Moore, 2005; IIARF, 2009). Prior research in this area is mainly prescriptive in that they suggest a number of exercises that can be used to introduce auditing software to students, without much emphasis on the specific practical aspects that will enhance its delivery in the classroom. One of the early efforts in this area is by Gelinas et al., (2001) who presented a case study based series of assignments. Although the assignments are useful, the practical aspects of pedagogy that instructors should be aware of when introducing auditing software in the classroom is largely overlooked by this study.

Nieschwietz et al., (2002) followed the work of Gelinas et al., (2001) and presented a series of assignments covering the revenue cycle, conversion cycle and sampling. Their work focused on what students were supposed to do in each of the presented assignments without emphasis on the pedagogical aspects.

Subsequently, Weidnmier and Herron (2004) compared the two most commonly used auditing packages on the market, which are ACL and IDEA, and provided feedback from both students and instructors on the use of the software. By analyzing the content of the software manuals of ACL and IDEA, they suggested how they can be used in the classroom environment. As with Gelinas et al., (2001) and Nieschwietz et al., (2002), little comment was made on the pedagogical aspects of introducing the software. Furthermore, no specific exercises or assignments were suggested that can enhance the integration and delivery of the audit software as part of the auditing curriculum.

The limited research in this area has also not explored the most appropriate methods of assessing students' learning outcomes once CAATs are incorporated into the curriculum. In this instance, the AACSB's Standards can be a useful foundation for exploring students' learning outcomes and possible assessment tools (Shaftel and Shaftel, 2007). The AACSB shows a strong preference for direct measures of learning compared to indirect measures. Direct measures require demonstration of students' knowledge or skills acquired in their course of learning (Kelley et al., 2010), which would be most suitable for assessing learning outcomes for CAATs in the auditing curriculum. Examples of direct measures from this context might include the use of written assignments and tests incorporating the appropriate use of auditing software.

As shown by the above review of literature, integrating audit software into the auditing curriculum is a new development in many business schools. Given the limitations presented in these initial prior researches, the remainder of this paper outlines a tested but flexible pedagogy that can be utilized to introduce generalized audit software as part of the auditing curriculum. It first gives an overview of the auditing curriculum, technology used and resources at the AACSB accredited business school at UAE University, where the pedagogy presented in this paper has been developed and implemented.

PEDAGOGICAL METHODOLOGY

The auditing baccalaureate in Accounting at UAE University has three streams: Financial Accounting, Management Accounting and a General Specialization. The curriculum closely resembles the U.S. system since the college is AACSB accredited. For each of the three aforementioned streams, Principles of Auditing is a compulsory course, while Advanced Auditing is an elective. Principles of Auditing is a prerequisite for Advanced Auditing. At the present point in time, many of the students who complete Principles of Auditing also go on to take Advanced Auditing. The typical number of students in each course per semester range from forty to sixty students. Each student and faculty in the university has access to a laptop, with lecture halls and classrooms having Wi-Fi access.

Computerized audit techniques in the form of generalized audit software is the first topic covered in Advanced Auditing. The course profile given to students on the first day of class has three weeks

allocated to this topic, which comprise about twenty percent of the course. Each class session is 75 minutes in duration and meets twice a week. Students in the pre-requisite Principles of Auditing class do not have any direct exposure to generalized audit software, other than being aware that these methods are now used by auditors in gathering evidence, with appropriate examples.

The textbook adapted for both Principles of Auditing and Advanced Auditing is "Auditing and Assurance Services: A Systematic Approach" by Messier et al., (2008). The textbook is in its 6th edition and it is bundled with an educational version of the ACL 9.0 audit software. Each chapter of the book has various ACL exercises. However, it is best for the instructor to tailor the exercises to suit his or her own class depending on how comprehensively the ACL program is integrated into the auditing curriculum.
The following sections detail an effective pedagogy that can be used to introduce students to ACL in six lecture sessions of 75 minutes each. The outlined pedagogy is flexible enough for individual instructors to make changes to it to suit their own curriculum and class format.

Class Session 1 (75 minutes)

In the first class, students are given a brief lecture on ACL and its specific uses, and told how the next three weeks will be proceeding. Then they are asked to install the ACL software off a CD on their laptops. As most students do not bring textbooks to class which contains the ACL program CD until the second week of lectures, it is efficient for the instructor to use several copies of the CD to ensure the quick installation on each of the students' laptops. Students are specifically asked to also install the 'ACL in Practice' PDF file as part of the installation routine.

Class Session 2 (75 minutes)

The second class starts the hands on practice using ACL. Prior research such as Weidnemier and Herron (2004) show that they essentially got students to go through the ACL workbook at their own space covering the first five modules. However, having first tried this approach, it was found to be more challenging for students as they had to familiarize themselves with the program and it capabilities on their own, with minimal input from the instructor.

A more effective method that improve the cognitive experience of students and get them off to a quick start is to first familiarize them with the ACL workspace, and then go on to the necessity of creating an ACL project, which precursor any analysis. This is done using a separate dataset on a company's accounts receivable data (available from the author on request). During this time, key points including the need to define data columns in the proper formats are explained. This first visual introduction to ACL is easily achieved by the use of a projector hooked onto the instructor's laptop. It is also important to inform students that the source data used in creating the project is secure, as ACL does not modify them at all.
Most students initially fail to see the purpose of creating a project in ACL, as they are mainly familiar with spreadsheets such as Excel. It helps at this juncture to stress that an ACL project is like a drawer or a cabinet, which is used to store all the relevant data for a particular audit. Once the project has been created, the concept of data categories should be explained in more detail, emphasizing that the three commonly encountered data types in ACL is character (ascii), numeric and date formats (Arens and Elder, 2008). Many students will have the misconception that if a particular column in ACL contains numbers, then it should be defined as numeric data. It is helpful to tell students that if a particular column is not going to be used for performing mathematical operations, then it should be set as character, unless it contains date type data. The example of a column of students' ID numbers can be used to illustrate this further. Since there is little value in adding or subtracting students' ID numbers, such a column should be defined as character even though they comprise of numbers or digits. This can be contrasted with a column of sales figures, where the auditor would be interested in obtaining the total value of sales or the highest value of a sales transaction. Such a column should always be defined as numeric.

After this visual introduction to ACL, students are asked to work through the first two chapters of the 'ACL in Practice' manual in the remainder of the class. This can be achieved by students in about 45 minutes as the first chapter is only a description of the fictitious company used in the manual. Chapter two requires students to open an existing project and familiarize themselves with basic ACL functions such as the statistics command and duplicate commands. It also introduces students to simple filters.

Class Sessions 3-5 (225 minutes)

Once the students are familiar with the basics, they proceed to complete chapters 3-5 chapters in the 'ACL in Practice' manual during the next three subsequent class sessions. These three chapters require students to first create a new project from a number of file types including Excel, Access and Text files. More advanced aspects of ACL are covered in these sessions, comprising of advanced filters and functions. Each chapter is allocated one class session of 75 minutes, and most students are able to complete each of the chapters in less than 75 minutes. During these sessions the instructor will monitor the progress and provide feedback. It was also found to be practical and effective at this stage to engage 2-3 students who are ahead of the other students to help their colleagues in going through the more challenging parts of the chapters. It was found that the chosen students were eager to contribute in this way, and it also ensured that students needing assistance received it in time as the instructor may not have sufficient time to devote to each individual student, especially in large classes.

By the end of chapter five, most students will have a good grasp of the key ACL commands ranging from the creation of projects to the writing of appropriate filters to achieve specific objectives such as to isolate invoices amounts within a given range. A number of students, however, will still overlook the importance of having to properly define variable columns according to the data types. It is therefore important for the instructor to frequently remind students of this critical task before starting to perform any analysis using ACL.

Class Session 6 (75 minutes)

Session six is the final session and it is used to reinforce in students the main concepts that they have learned in the previous classes. Each student is provided with a printed sheet of six ACL exercises which they are required solve within 45 minutes, utilizing an accounts receivables dataset. The data in Excel format is made available to students via Blackboard™, and is also available to the reader on request. The accounts receivable file has nine variables which are summarized in Table 1 below.

Table 1: Accounts Receivable Data Definitions

Variable Name	Description	Data Type
Amount	Dollar value of the sales transactions	Numeric
AR_Clerk	Accounts receivable clerk	Character
Authorized	Whether the transaction is authorized or not. Transactions exceeding the credit limit need authorization	Character
Cash_Receipts_Clerk	Cash receipts clerk	Character
Credit_Limit	Credit limit of the customer	Numeric
Customer_Number	Customer's unique number	Character
Due_Date	Due date of the invoice	Date
GL_Accounting	General ledger clerk	Character
Invoice_Date	Invoice date	Date
Invoice_Number	Invoice number	Character

The data used in the exercises is available from the author on request.

Students are instructed to first create a project and import the Excel data into ACL format before attempting the exercises. Most students are able to achieve this in a couple of minutes. At this juncture, it is also useful to reiterate the importance of defining the data appropriately as either character, numeric or date type before conducting any analysis. Once this is done, the 'verify' command can be used to ascertain whether the data matches the assigned data type. After these preliminary remarks, the students are given the opportunity to complete the exercises. Afterwards, the instructor walks through each of the exercises using the projector in the remainder of the class, stressing the main points. A summary of the exercises, the corresponding ACL steps needed to achieve them and key teaching notes are presented below.

Exercise 1

Objective: Provide a statistical snapshot of the credit sales transactions.

ACL steps: Go to Analyze} Statistical} Statistics. Select 'Amount' and click OK.

Teaching note: explain to students that a similar snapshot can also be obtained by using the 'Profile' command. However, this command provides more concise information than that provided by the statistics command, and it only works on numeric fields. On the contrary, the statistics command works with both numeric and date type data. This alternative approach can be quickly shown on screen.

Exercise 2

Objective: Identify if there are any duplicate invoices in the accounts receivable file.

ACL steps: Go to Analyze} Look for Duplicates. Select 'Invoice_Number' in the Duplicates On section and click OK.

Teaching note: inform students that the Duplicates command can be used on numeric, character and date fields. Mention that the result of this procedure is automatically saved as a file unless it is specified otherwise before running the command. Show students that more information about the identified duplicates can be viewed by clicking on the hyperlinks in the results table.

Exercise 3

Objective: Identify any gaps in the invoice numbers.

ACL steps: Go to Analyze} Look for Gaps. Select 'Invoice_Number' in the Gaps On section and click OK.

Teaching note: inform students that if there are more than five missing items, then ACL by default will report the results in ranges. This behaviour can be changed by selecting the 'List Missing Items' radio button and changing it to a different number. It is important at this point to emphasize the difference between the Gaps command and the Sequence command. Many students consider both commands to be identical. However, it should be stressed that ACL does not consider gaps or duplicates to be sequence errors, as long as the data is in ascending or descending order.

Exercise 4

Objective: Determine if there are any issues with the segregation of duties between the Accounts receivable clerk and the Cash receipts clerk.

ACL steps: Click 'Edit View Filter' button. Write the filter 'AR_Clerk = Cash_Receipts_Clerk' by double clicking on the variable names in the 'Available Fields' section. Click the Verify button followed by OK.

Teaching note: many students tend to manually write filters thereby increasing the risk of errors in the formulae. This is specially the case when dates have to be entered into the filter, given that ACL has its own syntax for describing date values. Therefore, it is helpful to advise students that it is more efficient to select variables for the filters by double clicking on them from the 'Available Fields' section, or by utilizing the 'Date' button where appropriate.

Exercise 5

Objective: Determine the total value and number of transactions for each customer.

ACL steps: Go to Analyze} Summarize. Select 'Customer_Number' in the Summarize On field and select 'Amount' in the Subtotals field. Click OK.

Teaching note: it is important to stress that the Summarize command can only be used on data defined as character or date type. An alternative to the Summarize command is the Classify command, which will give in addition the percentages for the classified items. Students find it helpful to see both techniques demonstrated on screen with the difference in the output pointed out.

Exercise 6

Objective: Perform an aging of the accounts receivables data to determine accounts that are more than three months overdue.

ACL steps: Go to Analyze} Age. Click on the Age On button and select 'Due_Date' from the list of available fields. Click Subtotal Fields button and select 'Amount'. In the Cutoff Date field, enter 31 December 2007, which is the company's year end. Keep the default periods in the Aging Periods section and click OK.

Teaching note: students often misunderstand or misinterpret the purpose of the Age On field and the Cutoff Date field when performing the aging. It is important for the instructor to clarify the latter points by explaining that the Age On field is used to calculate overdue period for each account, while Cutoff Date refers to the entity's year end. The intervals used in the aging are based on the values in the Aging Periods section, and this often requires further explanation. It should be emphasized that the default intervals calculated by ACL for aging are: 0-29 days, 30-59 days, 60-89 days, 90-119 days and 120-10,000 days. Students often query the last value of 10,000 in the interval. It should be explained that while the value of 10,000 is useful for identifying exceptionally old accounts, the user is able to designate any interval as required.

CONCLUSION

There has been considerable interest in the use of generalized audit software as a tool for improving audit efficiency. Audit software has been portrayed as an indispensible part of the auditor's toolbox that can make audits more effective and efficient. Consequently, regulatory bodies, accounting firms and accounting academics have all recognized the importance of integrating audit software into the auditing curriculum. Responding to these suggestions, many mainstream textbooks on auditing now incorporate auditing software into the relevant sections of their chapters. However, precious little guidance is available to instructors on how to best utilize and integrate auditing software into the auditing curriculum.

This paper addressed this issue and contributes to the teaching and learning of audit software by offering a tested but flexible pedagogy for incorporating audit software into the classroom. The presented pedagogy has been structured so that it can be effectively covered in six class sessions, with the final session used to reinforce the concepts learnt in the previous classes. It represents the culmination of four years of experience in using variants of this pedagogy. Students' feedback indicates that the developed pedagogy is highly effective, with 86 percent of students indicating that this style of instruction is successful for learning the application of the software. Therefore instructors introducing audit software for the first time as part of the auditing curriculum can use the presented methodology with little modification in the first semester, and then tweak it to their specific needs in later semesters. Instructors who have already integrated audit software into their curriculum may find alternative approaches and additional insight in this paper that can be utilized in their teaching.

A limitation of this paper is that it does not fully capture the effects of students' level of IT knowledge, cultural aspects and differences in individual learning styles in the teaching and learning of audit software. Further research from these perspectives will contribute to enhancing the instructional strategies for delivering audit software as part of the auditing curriculum. This will consequently enable business schools to respond to the call by employers and regulatory bodies to assist in providing accounting graduates who possess the core skills needed in an increasingly IT intensive audit environment.

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BIOGRAPHY

Nirosh Kuruppu is an Asst. Professor of Accounting at Sultan Qaboos University in Oman. His research papers have appeared in Accounting & Taxation and Managerial Auditing Journal. He can be contacted at: Department of Accounting, Sultan Qaboos University, P.O. Box 20, PC 123, Al Khod, Muscat, Oman. Email: niroshk@squ.edu.om.

FORECASTING FINANCIAL STATEMENTS USING RISK MANAGEMENT ASSOCIATES INDUSTRY DATA

Terrance Jalbert, University of Hawaii at Hilo
James E. Briley, Northeastern State University
Mercedes Jalbert, The Institute for Business and Finance Research

ABSTRACT

Finance professionals must frequently forecast financial statements. The common practice for forecasting financial statements is to apply the percentage of sales method. In this paper, we develop a new method for forecasting financial statements based data available from The Risk Management Association. This method offers three advantages over the percentage of sales method. First, it specifies the appropriate percentages for each account using industry average data. Second, it allows the developer to use any figure in the income statement or balance sheet as a starting point. For example, an investor who knows only that they have $100,000 available to start a company can forecast a balance sheet and income statement. Third, the percentage of sales method applies only to the income statement, while the method developed here allows estimation of both the income statement and balance sheet. Statements produced using the technique presented here are easily defendable to skeptical bankers.

JEL: A22, A23, C52, C53, C58

KEYWORDS: Forecasting, Banking, Entrepreneurship

INTRODUCTION

This paper presents a new method to forecast financial statements. The approach relies on industry financial data available from Risk Management Associates (RMA), Annual Statement Studies. RMA Annual Statement Studies provide historical financial statements for some 760 industries based on the statements of firms that operate within each industry. The approach requires the user to provide a single estimate of sales or owner's equity contribution. From this estimate, a full balance sheet and income statement are prepared. This methodology is founded in scientific principles and derived from industry average data. As such, the resulting statements are more credible than percentage of sales or ad-hoc estimates. This added credibility should lead to better funding opportunities and lower capital costs. The method also allows financial analysts to make better recommendations and entrepreneurs to make better project selection decisions.

The remainder of the paper is organized as follows: In the next section, we discuss the related literature. The following section discussed the RMA data. Next, financial statement forecasts based on an estimate of firm sales and an estimate of owner's equity contribution combined with RMA data are provided. The paper closes with some concluding comments and precautionary notes.

LITERATURE REVIEW

Many sources provide guidance for forecasting financials and preparing pro forma statements. The guidance suggests two basic approaches: percent of sales and comparable methods. The percent of sales approach uses history to forecast income statement and balance sheet accounts as a percent of projected sales. The judgmental approach improves on the strict percent of sales method by allowing for incorporation of additional information such as financial ratios to determine forecast levels of certain

accounts that do not vary directly with sales volume. These accounts include capital expenditures and debt levels. Both methods require a sales forecast as a starting point.

Corporate Finance texts concentrate on forecasting required new funds or external sources of financing for large established firms with a history of operating results (Block, Hirt and Danielson, 2009), (Gitman, 2009), (Brealey, Myers and Marcus, 2009) and (Ross, Westerfield and Jordan, 2010). Both approaches are well-suited for the analysis of long-term capital requirements of established firms. Financial Statement Analysis texts suggest preparing pro forma financial statements for prospective and credit analysis of established firms using a judgmental approach (Penman, 2010), (Subramayam and Wild, 2009), and (Revsine, Collins, Johnson and Mittelstaedt, 2009). The percent of sales and judgmental methods work well for companies that have past data to draw on but are not useful for a proposed or start-up company that needs to present a viable business plan to a lending institution.

Similar to what we propose but lacking detail, entrepreneurial texts suggest a comparables method for preparing pro forma statements as part of the business plan for companies in the proposal or start-up phases (Allen, 2006), (Kuratko, 2009), (Rogers, 2009), (Barringer and Ireland, 2010), (Adelman and Marks, 2004) and (Timmons, Zacharakis and Spinelli, 2004). Comparable companies operate in the same industry and provide a model for what the start-up wants to achieve. Using comparable financials as a base, pro forma statements are developed and revised according to the start-up's particular market, competition, and location. Entrepreneurial texts generally discuss the reasoning behind preparing pro forma statements based on comparables and in some cases even suggesting useful sources of information such as RMA needed to accomplish the plan. However, the entrepreneurial texts do not discuss the intricacies, offer comprehensive examples or provide templates of how to prepare an actual financial plan that can be used for financial planning, including investment, cash and financing needs.

There is a substantial and growing literature that documents the efficacy of using financial databases such as Compustat and Value Line to enhance student learning in finance courses by introducing "real world data" and hands-on analysis. Representative of this literature is (Loviscek, Crowley and Anderson, 2003), (Hess, 2006), (Kish and Hogan, 2001), (King and Jennings, 2004), (Kalra and Weber, 2004), (Gullett and Redman, 2004) and (Weaver, 2003) which finds increased student engagement, understanding and retention in Principles, Investments , Statement Analysis, Portfolio Management and Personal Finance courses. Using RMA data for forecasting is consistent with the best practices pedagogy that links theory with practice for the student by building analysis of real problems using actual data with all its inherent intricacy and ambiguity that is too often stripped away from textbook exercises.

DATA

Data for this paper were obtained from The Risk Management Association (RMA), Annual Statement Studies. Each year, RMA compiles information on the financial statements of firms by industry. The data includes balance sheet data, income statement data as well as sixteen financial ratios. The data are categorized based on the firm's asset level and sales level. Firms are sorted into six different asset levels and six different sales levels. RMA provides current financial data for each classification and several periods of historical data for each industry. Regional data is also available, but is not used in this study.

RMA ratios are developed based on the financial statements of some 285,000 firms. Data for each industry is averaged across the U.S. In addition average data by industry are available for six regions within the U.S. The data includes ratio averages for some 760 industries and is updated annually. The printed books, which include only national average data for each industry, are available from the RMA website with pricing starting at about $390. RMA sells individual industry reports for $140 each. An internet search suggests that many university libraries subscribe to the product. Used versions of the

books, with previous year data, are available for about $100. Web and CD based versions, including both national and regionally segregated data, are available with similar pricing (www.rmahq.org).

The appendix contains specimen of the RMA, Annual Statement Study data for the 2010 retail floor covering stores (NAICS 444210) classification. The specimen are reprinted with permission from Risk Management Associates. The appendix shows the samples using current data sorted by sales and assets respectively. Additional information on default probabilities provided by RMA are also included. The left six columns of the table labeled Current Data Sorted by Assets show the data categorized by assets. The first of these six columns shows the data for firms with total assets between zero and $500,000. The second column shows data for firms with sales of $500,000-$2 million and so forth. The two columns right of the labels show historical data. The leftmost column contains data for April 1, 2005-March 31, 2006. The next column presents data for the period April 1, 2006-March 31, 2007 and so forth through 2010. The Type of Statement area indicates the data source for each company and the total number of firms within the category. The careful reader will notice that for some ratio's each category includes three figures. In these instances, the top figure in the cell is the ratio for the upper quartile, the middle figure is for the median and the lower figure is for the lower quartile of firms.

FORECASTING FINANCIAL STATEMENTS

To forecast financial statements, the user must select the appropriate industry. While RMA provides data for many industries, some firms may not fall exactly into one of these industries. In this case, the user faces two options: select data for the closest matching industry or average the data for two or more industries. Users should select the method that most closely approximates their own firm. Next, users provide a kernel or starting point for the forecasting process. The starting point can be any income statement or balance sheet item. Common starting points are total sales or the owner's equity contribution to the firm. The development of financial statement forecasts using these two starting points follow.

Sales Estimate Starting Point

Consider an entrepreneur who wishes to start a retail floor covering store that will achieve annual sales of $1,500,000. When the process begins with a sales estimate, current or historical data sorted by sales should be used to formulate the statement estimates. The user should select the appropriate column corresponding with the sales estimate. In this case, the sales estimate falls between $1 Million and $3 Million, so the second column is selected.

The income statement is estimated first. Estimation of the income statement is straightforward. Each appropriate percentage must simply be multiplied by the sales estimate to obtain the correct figure. Table 1, Panel A presents the resulting calculations. The careful reader will notice that RMA does not provide cost of goods sold (COGS) percentages. However, COGS can be imputed as the difference between sales and gross profit. ($1,500,000 - $606,000 = $894,000) The income statement stops at earnings before taxes. This occurs because RMA data does not provide tax estimates. The entrepreneur should use their own tax situation to provide a tax rate estimate and complete the net income calculations.

To estimate the balance sheet, a link between the income statement and balance sheet must be identified. The sales-to-total assets ratio, *STA,* reported by RMA provides an easy link. For this demonstration the median value of 3.4 is selected. The following sales-to-total assets formula is used to compute the asset amount: $STA = \frac{Sales}{Total\ Assets}$. Imputing data from the example gives: $3.4 = \frac{\$1{,}500{,}000}{Total\ Assets}$. Solving the equation produces a total assets estimate of $441,176.47. From this figure and noting that total assets must equal total liabilities plus equity, the remainder of the balance sheet is estimated using RMA percentages. Table 1, Panel B presents the balance sheet results.

The careful reader will notice that the other current assets amount has been changed from the RMA figures of 0.0022 to 0.0023 in the current tables. This procedure is often necessary to address rounding issues that occur in RMA data. The dollar amounts involved in these rounding procedures are generally small.

Table 1: Financial Statement Estimates starting from a Sales Estimate

Panel A: Income Statement		
Item	**Percentage**	**Dollar Amount**
Sales	1	$1,500,000
Cost of Goods Sold		$894,000
Gross Profit	0.404	$606,000
Operating Expenses	0.401	$601,500
EBIT	0.003	$4,500
Other Expenses	0.007	$10,500
EBT	-0.004	-$6,000
Panel B: Balance Sheet		
Cash	0.121	$53,382.35
Trade Receivables	0.179	$78,970.59
Inventory	0.391	$172,500.00
Other Current Assets	0.023*	$10,147.06
Total Current Assets	0.714	$315,000.00
Net Fixed Assets	0.176	$77,647.06
Intangibles	0.034	$15,000.00
Other Non Current Assets	0.076	$33,529.41
Total Assets		$441,176.47
Notes Payable	0.159	$70,147.06
Current Mat. Long Term Debt	0.062	$27,352.94
Trade Payables	0.169	$74,558.82
Income Taxes Payable	0.001	$441.18
All Other Current	0.195	$86,029.41
Total Current	0.586	$258,529.41
Long Term Debt	0.16	$70,588.24
Deferred Taxes	0	$0.00
All Other Non-Current	0.122	$53,823.53
Net Worth	0.132	$58,235.29
Total Liabilities and Net Worth	1	$441,176.47

*This table shows financial statement forecasts starting from a sales estimate of $1,500,000. Panel A shows the income statement and Panel B shows the balance sheet. Other expenses in the RMA data are assumed to be exclusively interest expenses. * RMA figure changed from 0.022 to 0.0023 to facilitate balancing.*

Equity Contribution Starting Point

Sometimes an entrepreneur cannot formulate a reliable sales estimate. The entrepreneur might only know the amount of money they have available to invest in the firm. In this section, we use the owner's equity contribution into the firm as a starting point for the analysis. Table 2 shows the resulting financial statements. Because the analysis is based on a balance sheet estimate, we use current data sorted by assets for the forecast. Consider an entrepreneur who has accumulated $200,000 that he wishes to invest in a business. The entrepreneur wishes to remain the sole equity holder in the firm. From this figure, the financial statements can be estimated.

The estimation requires calculation of the firm's total liabilities and equity. To do this, the RMA percentage figure for net worth is observed. Identifying the appropriate RMA data column requires an approximation, because the total asset amount has not yet been established. We observe that net worth as a percentage of total assets ranges from about 16 percent to 36 percent. Given a net worth starting value of $200,000, it is probable that total assets will fall between $500,000 and $2 million and so the second column is selected. Total assets, *TA,* are estimated using the following formula:

$TA = \frac{Equity\ Contribution}{Equity\ Percentage\ of\ Total\ Asets}$. RMA data shows that Equity (Net Worth) is 29.1 percent of Total Assets, so the calculations for our example are: $TA = \frac{\$200{,}000}{0.291} = \$687{,}285.22$. Using this total asset estimate, the remaining balance sheet items are calculated using the appropriate percentages.

Next, the balance sheet is linked to the income statement. This is done, as before, using the sales to total assets ratio: $STA = \frac{Sales}{Total\ Assets}$. In this case, we know the total asset amount of $607,902.74 and the ratio of sales to total assets from RMA of 3.4. Thus the formula becomes: $3.4 = \frac{Sales}{\$687{,}285.22}$. Solving the equation for sales gives $2,336,769.76. The remaining income statement items are computed using the sales estimate and the appropriate RMA percentages.

Table 2: Financial Statement Estimates starting from an Owners Equity Estimate

Panel A: Income Statement		
Item	**Percentage**	**Dollar Amount**
Sales	1	$2,336,769.76
Cost of Goods Sold		$1,483,848.80
Gross Profit	0.365	$852,920.96
Operating Expenses	0.342	$799,175.26
EBIT	0.023	$53,745.70
Other Expenses	0.004	$9,347.08
EBT	0.019	$44,398.63
Panel B: Balance Sheet		
Cash	0.104*	$71,477.66
Trade Receivables	0.241	$165,635.74
Inventory	0.347	$238,487.97
Other Current Assets	0.039	$26,804.12
Total Current Assets	0.731	$502,405.50
Net Fixed Assets	0.146	$100,343.64
Intangibles	0.04	$27,491.41
Other Non Current Assets	0.083	$57,044.67
Total Assets		$687,285.22
Notes Payable	0.159	$109,278.35
Current Mat. Long Term Debt	0.052	$35,738.83
Trade Payables	0.163	$112,027.49
Income Taxes Payable	0.003	$2,061.86
All Other Current	0.165	$113,402.06
Total Current	0.542	$372,508.59
Long Term Debt	0.108	$74,226.80
Deferred Taxes	0	$0.00
All Other Non-Current	0.059	$40,549.83
Net Worth	0.291	$200,000.00
Total Liabilities and Net Worth	1	$687,285.22

*This table shows financial statement forecasts starting from an owner's capital contribution of $200,000. Panel A shows the income statement and Panel B shows the balance sheet. Other expenses in the RMA data are assumed to be exclusively interest expenses. * RMA figure changed from 0.105 to 0.104 to facilitate balancing.*

JUDGMENT ENHANCED STATEMENTS

In some instances it may be necessary to make adjustments to the data provided by RMA to reflecting the preparer's judgment. This might be necessary for several reasons. First, data may not be available for an industry or the sample size for an industry may not be sufficient to provide a reliable average. Adjustments might also be necessary if the industry or economy has experienced a shock such as the events of September 11, 2001. In these cases, historical based financial statement estimates created from RMA data might not fairly represent future expectation. In these and certainly other instances adjustments to the historical figures are appropriate based on the judgment of the preparer.

CLASSROOM IMPLEMENTATION AND ASSESSMENT

The financial statement forecasting techniques demonstrated here are suitable for use in finance, accounting or management courses. The authors have successfully integrated the technique into the principles of finance courses, required of every business student at one university. The technique is also utilized in the small business finance course, which is offered as an upper division business elective for business majors. In both cases the technique is taught in conjunction with financial statement and ratio analysis. Demonstrating the technique requires about 40 minutes of class time. Students are also assigned an out of class project requiring them to obtain RMA data from the University library and forecast financial statements.

Assurance of learning is an important function of any business program and teaching tool. To date efforts have not been undertaken to assess this technique in comparison to other financial statement forecasting techniques. One method to assess the technique would be to provide forecasts based on RMA financial statements and those developed using other methods to a series of bankers. The bankers might be asked to assess the quality of the financial statement forecasts from the two methods.

While direct assessment of the technique has not been completed, some casual observations can be noted. First, students completing the Principles of Finance Course complete a teacher evaluation at the end of the course. One open ended question asked on the evaluation is "What is the most valuable element of the course?" With some frequency, students note that financial statement forecasting was among the most valuable elements learned in the course.

CONCLUDING COMMENTS AND PRECAUTIONARY NOTES

This paper demonstrates a method to forecast financial statements using industry average information available from Risk Management Associates. The methodology developed here offers three advantages over the percentage of sales method commonly found in financial textbooks. The method here specifies the appropriate percentages for each account using industry average data. It allows the developer to use any figure in the income statement or balance sheet as a starting point. Third, the technique developed here is applicable to both the income statement and balance sheet while the percentage of sales method is applicable only to the income statement. The resulting financial statements are founded in science and thus are defendable to a skeptical banker or other interested party.

Several precautionary notes are in order. The figures presented by RMA represent averages for established companies. An individual starting a company might experience substantially different results, particularly in the earlier years of operation. Second, sometimes data presented by RMA is based on a small sample of firms. In these instances, the reported results might not be representative of what an entrepreneur might experience. Third, the data presented here are based on national averages. Regional data, also available from RMA might provide additional insights. Finally, the data presented by RMA is historical in nature. In some instances history may not be a good approximation of the future. This is likely to be the case in some industries around a major shock such as the events of September 11, 2001. Despite these limitations, the statements provided here provide an important improvement over the percentage of sales estimate or a best guess estimate.

APPENDIX

RETAIL—Floor Covering Stores NAICS 442210

Current Data Sorted by Assets													Type of Statement	Comparative Historical Data	
				1		6		1		1			Unqualified	11	17
	3		14		33		1		1				Reviewed	47	49
	14		24		14		1						Compiled	83	91
	45		56		14		3				3		Tax Returns	93	92
	23		48		35		13		5				Other	115	109
			64 (4/1-9/30/09)				295 (10/1/09-3/31/10)							4/1/05-3/31/06 ALL	4/1/06-3/31/07 ALL
	0-500M		500M-2MM		2-10MM		10-50MM		50-100MM		100-250MM				
	85		142		97		24		7		4		NUMBER OF STATEMENTS	349	358
	%		%		%		%		%		%		ASSETS	%	%
	11.2		10.5		10.3		5.5						Cash & Equivalents	7.5	8.5
	15.4		24.1		23.0		20.9						Trade Receivables (net)	29.0	31.1
	35.4		34.7		30.8		38.3						Inventory	36.2	32.2
	3.3		3.9		3.9		2.5						All Other Current	2.4	2.8
	65.4		73.1		68.0		67.1						Total Current	75.1	74.6
	21.8		14.6		20.2		17.1						Fixed Assets (net)	15.6	16.4
	2.9		4.0		3.2		8.8						Intangibles (net)	3.0	2.6
	9.9		8.3		8.7		7.0						All Other Non-Current	6.3	6.4
	100.0		100.0		100.0		100.0						Total	100.0	100.0
													LIABILITIES		
	20.4		15.9		11.0		10.5						Notes Payable-Short Term	12.0	13.9
	4.4		5.2		2.1		4.3						Cur. Mat.-L.T.D.	1.9	2.8
	26.3		16.3		17.0		19.1						Trade Payables	21.3	19.8
	.1		.3		.4		.1						Income Taxes Payable	.4	.2
	21.5		16.5		17.2		13.2						All Other Current	15.7	15.7
	72.7		54.2		47.8		47.1						Total Current	51.2	52.3
	24.8		10.8		10.6		11.0						Long-Term Debt	12.9	12.0
	.0		.0		.1		.7						Deferred Taxes	.1	.1
	19.3		5.9		5.8		8.5						All Other Non-Current	4.5	4.6
	-16.8		29.1		35.7		32.7						Net Worth	31.4	31.0
	100.0		100.0		100.0		100.0						Total Liabilties & Net Worth	100.0	100.0
													INCOME DATA		
	100.0		100.0		100.0		100.0						Net Sales	100.0	100.0
	39.4		36.5		37.9		33.4						Gross Profit	35.3	33.9
	40.7		36.3		37.6		33.6						Operating Expenses	32.5	30.7
	-1.3		.2		.3		-.2						Operating Profit	2.8	3.1
	.6		.4		.6		1.3						All Other Expenses (net)	.2	.4
	-1.9		-.2		-.3		-1.4						Profit Before Taxes	2.6	2.7
													RATIOS		
	2.4		2.5		2.8		1.7							2.4	2.4
	1.2		1.4		1.4		1.4						Current	1.5	1.5
	.6		.9		1.1		1.2							1.1	1.1
	1.2		1.4		1.3		.7							1.3	1.4
(84)	.5		.6		.6		.5						Quick	(348) .7	.7
	.1		.3		.3		.3							.4	.4
0	UND	**9**	39.4	**9**	38.7	**8**	47.7							**11** 33.9	**12** 30.8
10	36.4	**23**	15.7	**23**	16.1	**22**	16.3						Sales/Receivables	**25** 14.5	**26** 13.9
21	17.1	**37**	10.0	**44**	8.3	**42**	8.6							**42** 8.6	**43** 8.5
15	24.1	**24**	15.2	**26**	14.1	**35**	10.4							**24** 15.4	**20** 18.5
42	8.8	**49**	7.5	**51**	7.1	**83**	4.4						Cost of Sales/Inventory	**50** 7.3	**38** 9.5
79	4.6	**92**	4.0	**97**	3.8	**189**	1.9							**89** 4.1	**77** 4.8
7	55.1	**13**	27.7	**15**	24.2	**20**	17.9							**16** 22.9	**13** 27.9
21	17.6	**22**	16.4	**26**	13.8	**31**	11.9						Cost of Sales/Payables	**29** 12.8	**24** 15.0
45	8.2	**37**	9.9	**46**	7.9	**58**	6.2							**47** 7.8	**40** 9.2
	11.3		5.7		6.2		7.2							7.2	7.7
	53.6		16.6		13.0		10.4						Sales/Working Capital	15.8	14.3
	-17.5		-54.4		80.1		42.0							81.0	71.5
	6.0		6.0		4.7		4.0							13.7	14.9
(67)	1.0	(117)	1.0	(83)	1.1	(22)	.7						EBIT/Interest	(303) 4.0	(320) 4.2
	-8.3		-3.6		-3.9		-4.3							1.4	1.4
			4.1		9.0									7.3	5.0
		(11)	1.7	(15)	1.8								Net Profit + Depr., Dep., Amort./Cur. Mat. L/T/D	(43) 2.8	(49) 2.9
			-.2		-.1									1.4	1.0
	.3		.1		.1		.4							.1	.1
	2.0		.5		.5		.6						Fixed/Worth	.4	.4
	-.3		49.6		1.4		1.5							1.5	1.6
	.9		.8		.7		.9							.8	.9
	10.2		2.3		1.6		1.9						Debt/Worth	2.2	2.1
	-2.3		168.9		5.8		5.1							8.3	6.1
	68.2		30.3		19.7		12.1							53.1	59.9
(49)	11.1	(108)	5.0	(86)	2.6	(19)	3.1						% Profit Before Taxes/Tangible Net Worth	(299) 21.1	(318) 25.2
	-9.6		-26.4		-15.4		-4.2							3.3	7.2
	10.9		8.6		6.7		4.5							16.2	19.2
	.0		1.5		.9		-.1						% Profit Before Taxes/Total Assets	5.9	7.7
	-35.7		-8.2		-4.7		-12.5							1.0	1.8
	97.2		73.4		50.2		43.4							78.9	89.6
	27.0		35.3		20.3		13.5						Sales/Net Fixed Assets	34.8	37.4
	14.3		18.1		7.3		6.9							17.2	17.3
	7.3		4.6		3.5		3.7							4.6	5.1
	4.5		3.4		2.7		2.1						Sales/Total Assets	3.6	3.8
	2.7		2.2		1.8		1.6							2.7	2.8
	.5		.4		.5		.8							.4	.3
(63)	1.0	(111)	.7	(82)	.9	(19)	1.1						% Depr., Dep., Amort./Sales	(288) .6	(293) .7
	1.8		1.4		1.8		1.6							1.1	1.2
	3.3		2.1		1.4									2.0	1.7
(44)	5.9	(87)	3.9	(51)	3.3								% Officers', Directors' Owners' Comp/Sales	(216) 3.6	(221) 3.3
	9.1		5.9		7.2									6.7	5.9
	92532M		**532954M**		**1100202M**		**1689826M**		**2096393M**		**2454988M**		Net Sales ($)	**5309673M**	**5433190M**
	21065M		**151315M**		**399546M**		**504385M**		**573444M**		**692636M**		Total Assets ($)	**1374048M**	**1528665M**

M = $ thousand MM = $ million

RETAIL—Floor Covering Stores NAICS 442210

Comparative Historical Data

4/1/07-3/31/08 ALL	4/1/08-3/31/09 ALL	4/1/09-3/31/10 ALL	Type of Statement
13	11	9	Unqualified
52	49	52	Reviewed
70	78	53	Compiled
88	110	121	Tax Returns
114	118	124	Other
337	366	359	NUMBER OF STATEMENTS
%	%	%	ASSETS
9.4	8.3	10.3	Cash & Equivalents
28.7	25.2	21.1	Trade Receivables (net)
31.9	34.4	33.7	Inventory
4.0	2.8	3.6	All Other Current
73.9	70.7	68.8	Total Current
16.9	17.6	18.3	Fixed Assets (net)
2.4	3.9	4.2	Intangibles (net)
6.8	7.8	8.8	All Other Non-Current
100.0	100.0	100.0	Total
			LIABILITIES
14.4	15.6	15.2	Notes Payable-Short Term
3.0	4.7	4.1	Cur. Mat.-L.T.D.
19.4	19.4	19.4	Trade Payables
.3	.1	.3	Income Taxes Payable
14.7	17.3	17.7	All Other Current
51.8	57.1	56.7	Total Current
14.5	13.0	14.7	Long-Term Debt
.1	.1	.1	Deferred Taxes
5.3	6.8	9.5	All Other Non-Current
28.3	23.0	19.0	Net Worth
100.0	100.0	100.0	Total Liabilties & Net Worth
			INCOME DATA
100.0	100.0	100.0	Net Sales
35.3	34.7	37.5	Gross Profit
32.7	34.0	37.6	Operating Expenses
2.6	.8	-.1	Operating Profit
.4	.4	.6	All Other Expenses (net)
2.2	.4	-.7	Profit Before Taxes
			RATIOS
2.5	2.2	2.4	Current
1.5	1.4	1.4	
1.1	1.0	.9	
1.3	1.2	1.2	Quick
.7	.6	.6	
.4	.3	.2	
11 33.1	8 48.4	6 57.0	Sales/Receivables
25 14.4	23 15.6	20 18.5	
43 8.5	39 9.4	32 11.3	
19 19.3	22 16.8	24 15.4	Cost of Sales/Inventory
41 8.9	45 8.1	49 7.4	
76 4.8	94 3.9	92 4.0	
13 27.3	13 27.8	14 26.9	Cost of Sales/Payables
24 15.4	23 15.9	25 14.8	
43 8.5	40 9.0	43 8.5	
7.5	8.4	6.7	Sales/Working Capital
14.4	18.5	17.2	
109.4	-230.7	-50.2	
11.0	6.4	5.3	EBIT/Interest
(293) 3.3	(315) 1.8	(299) 1.0	
1.2	-.7	-4.1	
4.4	4.7	3.9	Net Profit + Depr., Dep., Amort./Cur. Mat. L/T/D
(41) 1.8	(44) 1.5	(37) 1.7	
.6	-.2	-.2	
.1	.2	.2	Fixed/Worth
.4	.5	.6	
1.4	6.3	165.0	
1.0	.9	.8	Debt/Worth
2.3	2.5	2.4	
7.2	26.5	-70.7	
52.2	36.5	26.1	% Profit Before Taxes/Tangible Net Worth
(288) 21.5	(292) 12.2	(268) 5.6	
4.4	-5.6	-12.7	
16.3	9.2	8.6	% Profit Before Taxes/Total Assets
5.8	2.3	.9	
.6	-4.2	-9.3	
86.5	76.8	65.7	Sales/Net Fixed Assets
33.1	32.4	28.1	
15.3	15.4	12.0	
4.8	5.1	4.7	Sales/Total Assets
3.7	3.6	3.3	
2.5	2.3	2.1	
.4	.4	.4	% Depr., Dep., Amort./Sales
(274) .7	(288) .7	(280) .9	
1.2	1.2	1.6	
1.9	1.7	2.1	% Officers', Directors' Owners' Comp/Sales
(202) 3.6	(210) 3.3	(193) 3.9	
6.6	6.3	7.2	
5731901M	5396098M	7966895M	Net Sales ($)
1653845M	1749744M	2342391M	Total Assets ($)

Current Data Sorted by Sales

0-1MM	64 (4/1-9/30/09) 1-3MM	3-5MM	295 (10/1/09-3/31/10) 5-10MM	10-25MM	25MM & OVER
58	100	54	67	42	38
%	%	%	%	%	%
8.4	12.1	12.7	9.8	9.3	6.9
12.1	17.9	23.6	30.0	23.6	21.8
40.8	39.1	26.7	25.0	33.8	34.2
3.8	2.2	5.9	4.8	2.2	3.2
65.1	71.4	68.8	69.5	68.9	66.0
21.3	17.6	16.1	18.2	18.5	18.3
3.9	3.4	4.9	2.4	4.6	8.0
9.7	7.6	10.2	9.9	8.1	7.7
100.0	100.0	100.0	100.0	100.0	100.0
15.9	15.9	13.9	18.0	13.3	11.5
5.2	6.2	3.1	2.1	1.9	4.3
25.9	16.9	16.6	18.2	19.4	21.6
.1	.1	.7	.5	.1	.2
18.9	19.5	17.8	13.0	12.8	25.2
66.1	58.6	52.2	51.8	47.4	62.8
28.2	16.0	9.4	8.2	9.7	15.5
.0	.0	.0	.0	.2	.4
15.0	12.2	6.3	6.0	4.6	10.3
-9.3	13.2	32.1	33.9	38.1	11.0
100.0	100.0	100.0	100.0	100.0	100.0
100.0	100.0	100.0	100.0	100.0	100.0
42.0	40.4	35.9	34.7	32.9	35.7
44.0	40.1	35.1	35.5	32.0	34.8
-2.1	.3	.8	-.9	1.0	.9
1.4	.7	.0	.4	.1	.9
-3.4	-.4	.8	-1.3	.9	-.1
3.6	3.5	3.9	2.1	2.0	1.7
1.2	1.4	1.4	1.4	1.4	1.3
.6	.8	.9	1.0	1.2	1.0
1.1	1.5	1.5	1.3	1.1	.9
(57) .4	.5	.8	.7	.5	.5
.1	.2	.3	.4	.3	.2
0 UND	5 78.1	9 40.3	18 20.4	9 39.1	5 77.9
9 41.1	14 25.3	22 16.5	28 13.2	21 17.3	20 18.6
26 14.1	27 13.6	38 9.5	39 9.4	38 9.6	41 8.9
26 13.8	24 15.3	20 18.3	14 26.1	26 14.1	30 12.0
85 4.3	56 6.5	41 8.9	35 10.4	45 8.2	60 6.0
243 1.5	126 2.9	72 5.1	62 5.9	79 4.6	110 3.3
6 61.7	14 26.7	13 27.2	15 24.0	14 26.2	18 20.5
20 17.8	26 13.9	22 16.6	25 14.9	24 15.2	33 11.2
69 5.3	44 8.3	35 10.4	40 9.2	38 9.5	62 5.9
3.9	5.7	5.7	8.6	8.2	7.8
18.7	17.8	18.9	20.9	14.8	17.3
-9.8	-28.6	-48.9	-415.3	42.3	-130.8
2.4	5.1	15.2	3.7	4.5	5.7
(41) -.5	(87) 1.2	(43) 2.6	(58) .9	(34) 1.5	(36) .9
-8.6	-3.8	-1.8	-6.2	-3.9	-3.5
			7.1		
			(10) 1.7		
			.0		
.2	.2	.2	.1	.2	.2
.7	1.1	.4	.5	.5	.7
-.4	-3.0	NM	1.6	1.4	NM
.7	.7	.8	.7	1.1	1.0
9.0	4.0	2.0	1.6	1.7	2.5
-2.6	-9.1	NM	6.2	7.9	-4.7
18.2	32.4	40.5	27.3	26.3	21.6
(36) 5.1	(69) 5.5	(41) 6.6	(56) 4.8	(38) 7.1	(28) 4.6
-27.6	-25.1	-11.7	-7.2	-6.7	-5.0
6.9	9.7	11.6	6.2	10.7	5.7
-2.4	.7	3.3	.7	2.3	-.1
-23.7	-7.8	-8.2	-9.6	-5.0	-9.0
103.9	60.9	66.4	58.3	68.0	61.9
21.5	25.7	42.7	29.3	34.3	21.1
5.5	13.3	14.3	12.1	11.3	8.1
4.5	5.1	4.8	4.5	4.9	4.7
2.0	3.4	3.2	3.6	3.3	3.0
1.0	2.2	2.2	2.6	2.6	1.8
.4	.5	.4	.4	.4	.6
(43) 1.1	(77) .9	(42) .7	(56) .9	(36) .8	(26) 1.1
3.6	1.7	1.2	1.8	1.1	1.7
4.6	2.8	2.1	1.7	1.0	.9
(26) 6.9	(65) 5.5	(34) 3.1	(36) 2.7	(21) 2.2	(11) 2.4
12.7	8.5	6.1	5.1	4.1	2.6
35484M	188780M	203567M	474691M	664700M	6399673M
30519M	88016M	74506M	151663M	215598M	1782089M

M = $ thousand MM = $ million

RETAIL—Floor Covering Stores NAICS 442210

Current Data Sorted by Assets

													Type of Statement				
					1		6		1		1		Unqualified		10		15
	3		13		29		1		1				Reviewed		45		48
	13		19		14		1						Compiled		75		81
	40		43		12		3				2		Tax Returns		75		83
	18		35		25		10		3				Other		79		88
			52 (4/1-9/30/09)				242 (10/1/09-3/31/10)								4/1/05-3/31/06		4/1/06-3/31/07
	0-500M		500M-2MM		2-10MM		10-50MM		50-100MM		100-250MM		Assets Size		ALL		ALL
	74		110		81		21		5		3		Number of Statements		284		315
	%		%		%		%		%		%		EXPECTED DEFAULT FREQUENCY		%		%
	1.02		1.06		.76		1.08								.25		.26
(73)	5.80	(109)	3.24	(79)	1.93		1.28						Risk Calc EDF (1 yr)	(254)	.63	(293)	.52
	16.47		8.43		5.36		6.39								1.24		1.19
Ba2	6.36	Ba1	5.20	Baa3	3.72	Ba1	5.20						Moodys EDF Rating (see note) Risk Calc EDF (5 yr)	Baa2	2.45	Baa2	2.43
B2	15.40	B1	10.44	Ba2	7.09	Ba2	6.00							Ba1	4.63	Baa3	4.13
Caa-C	39.15	B3	21.14	B1	12.07	B2	13.94							Ba3	7.77	Ba2	6.96
	%		%		%		%		%		%		CASH FLOW MEASURES		%		%
	50.5		43.1		49.4		45.4								40.8		38.8
(73)	39.7	(109)	36.3	(79)	39.4		35.9						Cash from Trading/Sales		31.3		31.1
	34.1		28.3		28.3		28.3								23.9		23.6
	5.8		5.5		8.8		8.1								5.1		5.9
(73)	1.9	(109)	1.7	(79)	4.1		5.2						Cash after Operations/Sales		1.9		2.8
	-2.1		-1.7		.4		3.1								-.8		-.3
	7.0		6.0		9.3		8.0								5.4		6.1
(73)	2.7	(109)	2.1	(79)	4.1		4.5						Net Cash after Operations/Sales		2.4		3.0
	-1.6		-1.4		-.8		2.9								.0		.3
	2.7		3.0		5.4		6.9								2.9		3.2
(73)	-.1	(109)	-.9	(79)	.6		2.4						Net Cash after Debt Amortization/Sales		.3		.2
	-4.1		-3.6		-2.4		-4.7								-2.2		-2.6
	5.2		8.3		6.2		11.1								7.3		7.5
(59)	1.7	(95)	.7	(75)	1.7	(20)	3.3						Debt Service P&I Coverage	(264)	1.9	(290)	2.2
	-.9		-.8		-1.3		.4								.0		.1
	11.3		14.7		11.4		18.3								15.6		12.4
(59)	2.1	(93)	2.2	(72)	3.3	(19)	8.2						Interest Coverage (Operating Cash)	(261)	3.8	(285)	4.5
	-4.5		-1.6		-.8		2.4								-.2		.2
	8.1		18.7		3.6		2.3								30.7		27.5
(68)	-4.4	(105)	-3.8	(77)	-12.0		-8.4						Δ Inventory	(274)	9.2	(301)	2.9
	-22.5		-20.7		-32.4		-20.9								-3.6		-11.4
	2.9		5.7		8.7		-2.9								31.6		25.2
	-17.9		-11.7		-11.8		-11.2						Δ Total Current Assets		12.9		5.7
	-31.5		-24.0		-27.0		-22.1								-3.1		-6.2
	-.1		2.2		4.4		2.1								28.3		20.0
	-9.3		-9.9		-6.1		-9.1						Δ Total Assets		10.9		4.2
	-25.2		-19.4		-18.0		-13.4								-.2		-4.7
	5.5		10.3		7.0		11.1								38.0		36.5
(71)	-15.9	(109)	-10.7		.0		1.1						Δ Retained Earnings	(282)	8.7	(313)	8.4
	-57.1		-42.5		-19.2		-34.4								-4.0		-5.6
	-6.9		-8.2		-8.4		-7.7								22.4		18.7
	-24.2		-17.8		-17.6		-16.8						Δ Net Sales		7.3		6.8
	-33.8		-29.0		-27.5		-24.5								-1.5		-3.4
	-10.9		-6.8		-7.0		-9.4								23.0		19.5
	-24.4		-17.6		-18.5		-15.5						Δ Cost of Goods Sold	(283)	7.5		7.3
	-37.8		-31.7		-30.9		-24.2								-3.5		-4.8
	89.1		75.0		120.9		59.7								93.9		111.3
(72)	-21.8		-26.4	(80)	-5.3		-25.5						Δ Profit before Int. & Taxes	(283)	24.3		16.8
	-88.6		-115.9		-76.3		-59.3								-28.9		-26.8
	.0		11.2		.3		9.8								27.7		24.9
(65)	-20.0	(104)	-10.0	(76)	-12.3	(19)	-4.2						Δ Depr./Depl./Amort.	(272)	.0	(295)	-3.6
	-50.0		-42.6		-43.8		-12.5								-32.8		-33.3
	31.8		5.9		8.6		13.6						RATIOS		25.5		27.8
(73)	-1.1	(109)	-6.7		.6		4.8						Sustainable Growth Rate	(279)	5.2		7.3
	-28.5		-38.3		-19.1		-8.7								-10.6		-8.3
	.1		.6		.5		1.9								.5		.3
	2.6		4.2		2.8		5.3						Funded Debt/EBITDA		2.0		1.7
	-1.3		-.6		NM		-.7								4.8		4.4
	81592M		**406945M**		**883072M**		**1480387M**		**1022279M**		**1364978M**		Net Sales ($)		**4951179M**		**4186246M**
	17663M		**114517M**		**326549M**		**424261M**		**408563M**		**457583M**		Total Assets ($)		**1233660M**		**1251801M**

Comparative Historical Data

See Pages 00 through 00 for Explanation of Ratios and Data

M = $ thousand MM = $ million

Note: The ratings are Moody's.edf rating (e.g. Ba1.edf) and not Moody's Investor Services Long-Term Bond Ratings. If a number of statements appears for the Risk Calc EDF (1 yr), it also applies to the (5 yr).

RETAIL—Floor Covering Stores NAICS 442210

Comparative Historical Data

	4/1/07-3/31/08 ALL		4/1/08-3/31/09 ALL		4/1/09-3/31/10 ALL
Type of Statement					
Unqualified	10		8		9
Reviewed	45		44		47
Compiled	53		56		47
Tax Returns	77		81		100
Other	90		90		91
Sales Size	ALL		ALL		ALL
Number of Statements	275		279		294
EXPECTED DEFAULT FREQUENCY	%		%		%
	.73		1.50		.87
Risk Calc EDF (1 yr)	(272) 1.65	(273)	4.45	(290)	2.98
	4.03		10.25		8.39
Moodys EDF Rating (see note)	Baa3 4.23	Ba2	6.45	Ba1	4.77
Risk Calc EDF (5 yr)	Ba3 7.93	B1	11.89	Ba3	9.31
	B2 13.77	Caa-C	24.91	B3	21.64
CASH FLOW MEASURES	%		%		%
	44.9		43.2		47.1
Cash from Trading/Sales	(274) 34.0	(277)	34.1	(290)	38.5
	26.2		26.6		29.3
	6.7		5.9		6.8
Cash after Operations/Sales	(274) 3.2	(277)	2.2	(290)	2.4
	.1		-.3		-1.3
	6.9		6.0		7.1
Net Cash after Operations/Sales	(274) 3.5	(277)	2.4	(290)	3.0
	.1		-.3		-1.0
	3.2		2.4		3.6
Net Cash after Debt Amortization/Sales	(274) .4	(277)	-.2	(290)	-.1
	-2.0		-3.3		-3.6
	8.0		6.3		6.2
Debt Service P&I Coverage	(246) 1.8	(249)	1.6	(256)	1.4
	.0		.0		-.8
	11.7		9.9		12.8
Interest Coverage (Operating Cash)	(240) 3.3	(240)	3.1	(250)	2.8
	.1		-.3		-1.6
	15.1		11.8		9.1
Δ Inventory	(264) -2.3	(267)	-2.4	(278)	-5.6
	-15.2		-21.7		-23.3
	20.0		9.7		5.8
Δ Total Current Assets	3.0		-6.9		-11.6
	-13.6		-19.4		-24.8
	16.4		8.5		3.3
Δ Total Assets	2.3		-3.4		-8.8
	-8.3		-13.9		-19.5
	33.3		17.5		8.6
Δ Retained Earnings	(272) 6.2	(276)	-1.0	(290)	-5.8
	-15.5		-28.8		-35.4
	12.8		2.9		-7.9
Δ Net Sales	-2.0		-7.7		-17.9
	-13.3		-18.5		-29.3
	12.6		3.0		-8.7
Δ Cost of Goods Sold	(274) -3.0	(278)	-9.2		-19.2
	-17.2		-20.1		-31.7
	67.6		40.7		87.2
Δ Profit before Int. & Taxes	-2.2		-27.7	(291)	-20.0
	-58.5		-88.5		-85.0
	25.5		15.3		3.2
Δ Depr./Depl./Amort.	(257) -6.3	(261)	-9.1	(271)	-10.0
	-35.1		-38.7		-40.0
RATIOS	29.7		16.4		13.1
Sustainable Growth Rate	(272) 4.2	(277)	.3	(292)	-1.7
	-12.8		-21.1		-24.8
	.4		.8		.5
Funded Debt/EBITDA	2.2		3.5		3.5
	5.6		14.0		-.8
Net Sales ($)	4883721M		4461331M		5239253M
Total Assets ($)	1396611M		1417006M		1749136M

Current Data Sorted by Sales

	0-1MM		1-3MM		3-5MM		5-10MM		10-25MM		25MM & OVER
Type of Statement											
Unqualified											9
Reviewed	1		6		7		23		8		2
Compiled	11		15		8		7		4		2
Tax Returns	24		42		12		12		6		4
Other	7		24		17		17		13		13
			52 (4/1-9/30/09)				242 (10/1/09-3/31/10)				
Sales Size	0-1MM		1-3MM		3-5MM		5-10MM		10-25MM		25MM & OVER
Number of Statements	43		87		44		59		31		30
EXPECTED DEFAULT FREQUENCY	%		%		%		%		%		%
	2.29		1.16		.75		.76		.73		.80
Risk Calc EDF (1 yr)	7.15	(86)	4.86	(43)	2.24	(58)	1.77	(30)	1.11		2.33
	15.52		10.39		6.54		6.94		4.13		7.77
Moodys EDF Rating (see note)	Ba3 8.29	Ba1	5.69	Baa3	3.93	Baa3	3.94	Baa3	3.65	Baa3	4.29
Risk Calc EDF (5 yr)	B3 21.60	B1	11.91	Ba3	8.81	Ba2	7.32	Ba1	5.18	Ba2	7.50
	Caa-C 36.92	Caa-C	30.28	B3	17.52	B2	16.84	Ba3	9.73	B3	18.22
CASH FLOW MEASURES	%		%		%		%		%		%
	55.3		50.1		43.1		44.6		42.3		47.9
Cash from Trading/Sales	(42) 42.7	(86)	38.5	(43)	37.7	(58)	39.4		33.7		36.1
	34.1		32.1		29.6		27.5		27.6		27.1
	11.0		6.4		5.8		5.4		8.7		6.9
Cash after Operations/Sales	(42) .8	(86)	2.0	(43)	2.6	(58)	2.1		3.5		4.7
	-4.6		-1.9		.4		-1.1		.1		1.5
	12.9		7.7		5.7		5.7		8.2		7.2
Net Cash after Operations/Sales	(42) 4.0	(86)	2.6	(43)	3.1	(58)	1.8		2.9		4.3
	-4.0		-1.3		.3		-.9		-1.2		1.9
	5.6		3.0		4.2		2.7		5.2		5.0
Net Cash after Debt Amortization/Sales	(42) -.1	(86)	-.8	(43)	.2	(58)	-.6		.6		1.8
	-4.9		-3.8		-5.7		-2.4		-2.6		-1.8
	2.5		5.6		12.0		6.2		8.9		15.3
Debt Service P&I Coverage	(30) .8	(79)	1.3	(36)	2.1	(55)	.9	(28)	1.7	(28)	3.3
	-1.4		-.9		.0		-1.2		-1.5		.4
	4.5		13.2		16.1		10.2		15.5		36.3
Interest Coverage (Operating Cash)	(30) .8	(77)	2.6	(35)	3.4	(54)	2.9	(26)	3.5	(28)	9.6
	-8.4		-1.7		.0		-2.5		-3.2		1.7
	8.8		6.6		21.2		15.8		4.4		2.6
Δ Inventory	(40) -5.8	(82)	-3.7	(42)	-13.2	(55)	-4.8	(30)	-11.3	(29)	-6.1
	-27.7		-16.5		-36.3		-23.9		-28.8		-19.2
	4.8		5.8		14.8		1.6		4.9		18.4
Δ Total Current Assets	-10.8		-11.8		-12.9		-12.8		-12.2		-8.1
	-36.3		-25.5		-27.5		-27.2		-28.1		-14.5
	-.2		2.5		6.0		-.9		6.8		9.1
Δ Total Assets	-7.1		-9.2		-3.4		-12.2		-2.9		-8.7
	-23.2		-21.3		-18.5		-19.2		-20.8		-10.0
	-1.7		8.7		19.6		5.2		35.3		6.8
Δ Retained Earnings	(42) -14.9	(85)	-10.2		-6.7	(58)	-4.4		5.5		.4
	-58.8		-34.5		-39.4		-38.6		-15.4		-20.6
	-9.4		-7.1		-8.5		-4.8		-7.4		-7.9
Δ Net Sales	-26.8		-19.9		-16.7		-17.9		-14.8		-15.4
	-41.8		-30.7		-27.7		-29.3		-27.0		-19.4
	-13.5		-5.4		-10.8		-5.3		-2.9		-9.1
Δ Cost of Goods Sold	-33.9		-21.9		-17.8		-19.1		-14.6		-13.6
	-44.3		-33.4		-31.9		-29.5		-25.3		-21.9
	72.9		103.2		104.8		87.4		71.2		99.6
Δ Profit before Int. & Taxes	(41) -26.7		-17.4		-22.1	(58)	-15.4		-3.1		-31.9
	-104.5		-88.9		-107.6		-123.6		-54.6		-91.9
	.0		.0		12.8		5.9		3.7		2.6
Δ Depr./Depl./Amort.	(37) -8.3	(83)	-19.7	(40)	-15.9	(56)	-8.4	(29)	-5.7	(26)	-3.8
	-45.0		-51.3		-44.6		-33.4		-50.3		-12.4
RATIOS	34.8		7.0		4.1		10.3		17.2		14.0
Sustainable Growth Rate	2.7	(86)	-5.7	(43)	-10.7		-1.6		4.8		2.8
	-13.6		-34.9		-38.9		-30.1		-22.6		-6.0
	.0		.5		.5		.7		.5		.3
Funded Debt/EBITDA	20.6		3.7		2.2		3.3		2.2		4.0
	-1.6		-.4		NM		-1.2		5.9		17.4
Net Sales ($)	25869M		162309M		166505M		416498M		503127M		3964945M
Total Assets ($)	20495M		72486M		62844M		134253M		174538M		1284520M

See Pages 00 through 00 for Explanation of Ratios and Data

M = $ thousand **MM = $ million**

Note: The ratings are Moody's.edf rating (e.g. Ba1.edf) and not Moody's Investor Services Long-Term Bond Ratings. If a number of statements appears for the Risk Calc EDF (1 yr), it also applies to the (5 yr).

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BIOGRAPHY

Terrance Jalbert is Professor of Finance at the University of Hawaii at Hilo. He is also an arbitrator for the Financial Industry Regulatory Authority. His research appears in Journals that include, *International Journal of Finance, Financial Services Review, Journal of Applied Business Research, Journal of Personal Finance, Journal of Emerging Markets, International Journal of Business and Finance Research* and *Journal of Accounting Education.* He can be reached at University of Hawaii at Hilo, College of Business and Economics, 200 West Kawili St., Hilo, HI 96720. Email: jalbert@hawaii.edu.

James E. Briley is Assistant Professor of Finance at Northeastern State University. His research appears in journals that include *Journal of Finance* and *Review of Business and Finance Case Studies.* He can be reached at Northeastern State University, College of Business and Technology, Tahlequah, OK 74464. Email: brileyj@nsuok.edu

Mercedes Jalbert is Managing Editor for The Institute for Business and Finance Research. Her research appears in journals that include, *Financial Services Review, Tax Notes, Accounting and Taxation, International Journal of Management and Marketing Research,* and *Journal of Emerging Markets.* She can be reached at P.O. Box 4908, Hilo, HI 96720, admin@theIBFR.com

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