Business Education & Accreditation

CONTENTS

USING AN ACTIVE LEARNING APPROACH TO CLOSE THE LOOP

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ABSTRACT

The AACSB International requires schools accredited by that body to assess student learning outcomes and to meet the standard set by the school as well as to create a method to improve student performance. We use the active learning approach to improve the Managerial Accounting class performance which was below par. In support of other studies in the science fields, the active learning approach is the driving force to improve student performance in Managerial Accounting. However, it appears that active learning does not help improve learning at the higher levels of Bloom's Taxonomy.

JEL: M40

KEYWORDS: Active Learning Approach, Accounting, Education

INTRODUCTION

One of the major requirements in the AACSB International, an accrediting body for business schools, is the Assurance of Learning (AOL) in Standard 8. It describes how to determine student outcomes of learning and to conduct assessment of learning as well as to "close the loop". "Closing the loop" requires that colleges and universities determine a systematic method that will improve student learning outcomes measured by the metrics previously defined and set by the faculty. Therefore, schools must not just assess, but follow up in ways to improve the learning outcome of students. The rationale is that if we provide a systematic method that improves the assessment metrics, it will lead to improved student learning.

In the field of accounting at Menlo College we assess the students learning outcomes in the two principles of Financial and Managerial accounting classes which are required of all business students. In particular, this study focuses on the second principle course, Managerial Accounting ACC 202, because students experience greater difficulty in learning the concepts in Managerial Accounting.

In 2013, the accounting faculty members established an assessment tool comprised of general questions related to concepts that we believe all business students should know. Two tests, one for Financial and another for Managerial, consist of ten general multiple choice questions. Moreover, we set a 70% average score as the acceptable level of performance. The average score for Financial Accounting was 77% in Fall 2013 and 63% in Spring 2014. However, average scores were disappointing for Managerial Accounting with an average of 47% in Fall 2013 and 53% in Spring 2014. The Financial Accounting average scores improved in Fall 2014 to 75% and remained at that level. However, Managerial Accounting test averages remained subpar to the standard set (70%), ranging between 54% and 67% from 2014 to 2016. It confirmed that students experience more difficulty learning concepts in Managerial Accounting.

Aside from the difficulty of the concepts, there are two possibilities that led to the lower than expected results. One, the students were not motivated. They were told the results of the exam will count only as

extra credits for the class. Two, students may have not learned or have forgotten the topics covered earlier in the semester. However, test scores on Exam 1 covering earlier topics refutes both possibilities as the average score was 83%. The average score shows that students were motivated and did learn the concepts covered earlier in the semester.

To improve the student learning and assessment test performance, as well as to "close the loop", we handed out worksheets with topics to review from the beginning of the semester to all sections of ACC 202. In Fall 2014 and Spring 2015 we administered the exam again, and the results improved slightly, but still below 70%.

It was evident that providing students with review worksheets was not sufficient, but the students needed to actively participate in the learning process. As McLaughlin et. al. (2014) found, "active learning exercises such as teamwork, ….. that prompts students' engagement and reflection encourage them to explore attitudes and values, while fostering their motivation to acquire knowledge and enhance skills" in the health professions school. [2014, p. 236]. In this case, the students' attitude towards accounting which is typically viewed as a 'boring subject' can be overcome by the learning process of active learning and engaging students in the subject matter.

Our study examines the students learning outcome using test scores by focusing on the active learning approach. If we find that active learning results in higher test scores, we can imply that the active learning results in higher student learning.

Our findings are similar to those of Jensen, Kummer, and Godoy (2015) who examined a flipped classroom approach in a life science class. They found that the "active-learning style of instruction" of the flipped classroom resulted in higher learning compared to a traditional classroom approach. Our results also support the fact that active-learning results in higher student learning in Managerial Accounting, measured by the assessment test scores. The same results are corroborated by Riley and Ward (2017) who found individual active learning in an Accounting Information Systems class produced higher student learning than in collaborative active learning and passive learning. Adler and Milne (1997) also found that action-oriented learning tasks results in improved learning by accounting students.

The remainder of the paper is organized as follows. Relevant literature review is discussed in the next section followed by data and methodology. The results are presented in the next section. Finally, concluding comments are provided in the last section.

LITERATURE REVIEW

While many studies examine the flipped classroom approach, they found that the value of the flipped approach lies in the "active learning style of instruction" conducted in the classrooms. Prince (2004) defines the key element of "active learning" is that students are engaged in the activity and in the learning process, typically in the classroom. While he examines differences between active learning, collaborative learning, cooperative learning, and problem based learning, we focus on the general definition of active learning.

Other researchers have compared active learning to the traditional lecture format. For example, Tune, Sturek, and Basile (2013) studied two groups, one where students were required to watch prerecorded lectures before class, and were given quizzes and homework followed by a question-answer/problem solving period in a physiology class. The control group attended optional lectures and were not given quizzes or homework. The findings provided strong evidence that the flipped classroom (experimental) group outperformed the traditional (control) group by 12 percentage points. They concluded that the homework and in-class quizzes are "critical motivating factors that likely contributed to the increase in student exam performance" [Tune, Sturek, and Basile, p. 316].

However, Jensen, Kummer, and Godoy (2015) examines a flipped classroom approach and a non-flipped classroom method for a life science class, and found that the flipped classroom does not result in higher learning gains or better attitudes compared with the non-flipped classroom when both utilized an active-learning, constructivist approach. They conclude that it is not the order in which the instructor participates in the learning process, but the active learning style. The notion that outcomes from active learning as compared to the traditional lecture pedagogical style appear to be favorable was corroborated by Wilson (2012) in a legal environment class.

McLaughlin, J.E, Roth, M. T., Glatt, D. M., Gharkholonarehe, N., Davidson, C.A., Griffin, L. M., Esserman, D. A., and Mumper, R. J. (2014) also found that learning that resulted from the flipped classroom was a result of the active learning exercises, such as team work, debates, self-reflection, and case studies, that prompts students' engagement and reflection encourage them to explore attitudes and values, while fostering their motivation to acquire knowledge and enhance skills" [McLaughlin, et. al., p. 236].

Finally, Findlay-Thompson and Mombourquette's (2014) study indicated that students liked the interactive method, where one student interviewed stated, "In our class, we could ask questions all the time. I did better because of this" [Findlay-Thompson and Mombourquette, p. 67]. However, other students did not believe it materially affected their grades. Based on the literature review related to the flipped classroom, regardless of the field of study, evidence is strongly in support that active learning and in-class activities are key to the success of student learning rather than the flipping process of lecture outside of the classroom followed by the in-class learning activities.

Our study adds to the literature by examining whether the active learning style improves the student learning outcomes as compared to another class that did not engage in active learning. Four sections of ACC 202 used a traditional method of lectures, homework assignments, and exams. However, to test the effect of the active style, two sections used the active method while the other two were only given the same worksheets without any additional follow-up. We define active learning as an active engagement in the classrooms including student working on problems in teams of 2-3, every student participated in responding to questions on the review sheets in class, students are randomly asked to work on problems, and students volunteered to respond to questions. Students are given participations points for their efforts.

Based on the two groups, Active (experimental group) and non-Active (control group) we test the following hypotheses.

> H1: Active learning increases assessment test scores in Managerial Accounting classes.
> Our second hypothesis states that assessment test scores will improve for higher learning levels as defined by Bloom's taxonomy when active learning is utilized.
>
> H2: Active learning will improve assessment test scores on higher learning levels as defined by Bloom's taxonomy.

DATA AND METHODOLOGY

During Spring 2016, two sections utilized an active review session while two other sections did not. Two sections of the managerial accounting course (or the experimental group) were given review sheets that included all the topics covered during the semester. They were required to review it prior to class, and to complete the worksheets. The professor instructed them that the class will work on the worksheets and all students must participate in class. To engage the active learning approach, students were informed that they will be called on to respond to the worksheet questions, and to work on matching problems together in class in a positive environment. The instructor started from the back of the class, and each student were asked to answer to one of the numerous questions from the worksheet. Students were awarded participation

points for their work. The students of the other two sections (control group) were told that they will be tested on the concepts covered throughout the semester and they should review the material themselves. However, no additional worksheets were handed out nor did the students review in class.

The group that use the active method are labelled as "Active" while the other group is defined as "Non-Active". Table 1 presents a summary of the two samples described above. The student profiles are divided by their majors, which appears to be somewhat similar. It shows that the percentage of students majoring in quantitative fields (accounting and finance) are 29% and 25%, respectively for the Sections with Active review and the ones without. The relatively non-quantitative fields of management and marketing are 71% and 75% for the Active ones with review and the non-Active group, respectively. The distribution of the different majors in both sections appear to be relatively similar. The average GPA is 3.201 versus 3.102 for the two samples. Testing the null hypothesis that the sample average GPA are equal gives a 31.42% probability. These results provide evidence that the two samples are similar in students' major and GPA.

Table 1: Summary Statistics of Two Samples: Active Group and Non-Active Group

Sections:	Active Group (Two Sections)	Non-Active Group (Two Sections)	Probability the Samples Come from a Different Population
Major:	Frequency of Students in the Major (Percentage)		Ho: Samples Are Equal
Accounting	9 (20.0%)	5 (15.6%)	
Finance	4 (8.9%)	3 (9.4%)	
Management	24 (53.3%)	9 (28.1%)	
Marketing	8 (17.8%)	12 (37.5%)	
Undeclared	0 (0.0%)	3 (9.4%)	
GPA:	3.201	3.102	0.3142
Average GPA	3.201	3.102	0.314
Sample Size	45	32	

This table shows the frequency of the students' declared major as well as the average GPA for each group, "Active" and "Non-Active". We test the null hypothesis that the GPA for Active and non-Active are equal. The test shows that there is 31.42% chance they are equal.

To test the hypothesis that the class using the active approach is expected to show a higher assessment test scores, we use a t-test to examine the difference between the two samples. Finally, to control for other factors such as major and GPA, we run a multiple regression as follows:

$$Score_i = \alpha + \beta_1 DUM_i + \beta_2 GPA_i + \beta_3 A\&F_i + \beta_4 Mang_i + \beta_5 Mktg_i + \epsilon_i \qquad (1)$$
where:

Score is the assessment test score for student i.

DUM_i is the dummy variable   = 1.0 if Active review was used
           = 0   Otherwise

GPA_i is the student i's overall GPA

$A\&F_i$ is a dummy variable to   = 1 if accounting or finance major
           = 0 Otherwise

$Mang_i$ is a dummy variable to = 1 if management major
           = 0 Otherwise
$Mktg_i$ is a dummy variable to   = 1 if marketing major
           = 0 Otherwise

Evidence supporting our hypothesis would exhibit a positive and statistically significant β_1 coefficient. GPA is used as a proxy for motivation as we postulate that students who have higher GPAs will be more motivated to perform better.

Finally, we utilize Bloom's Taxonomy to test our second hypothesis which examines whether the active learning approach helps students succeed throughout the hierarchy of learning. That is, will students learn to apply only the lowest level of learning, "knowledge of terminology" or will the active learning approach help them to use the higher levels of learning such as to apply or to analyze?

We identify the level of cognitive process needed for each of the ten multiple choice questions. The ranking from the basic learning hierarchy (labelled 1) to the highest (labelled 4) were used, where Level 1 learning to remember, Level 2 to understand, Level 3 to apply, and Level 4 to analyze. While Bloom's taxonomy gives six levels, the two highest form of thinking, evaluate and create were not applicable in the assessment test. We assigned the level of learning for each test question and are displayed in Table 4, Panel A.

The final analysis examines the correlation between the Bloom's hierarchical levels of difficulty in cognitive processing and the Managerial Accounting assessment questions.

RESULTS

Table 2 summarizes the average score for the two groups, Active and non-Active as well as the probability statistics testing the null hypothesis that the two groups are equal. The results show that the probability that the Active group has a higher score that the non-Active group is .01282, implying that the average test score of the Active group is statistically significantly higher than the non-Active group, providing evidence in support of our first hypothesis. However, the scores are 56.67% versus 41.25%, far below the expected 70% standard set by the accounting faculty.

Table 2: The Average Score for the Difference between the Active versus Non-Active Groups

Classes	Sample Size	Average Score Out of 10 Possible	Probability That a=b
Active Approach (A)	45	5.667	
Non-Active Approach (B)	33	4.125	
Difference		1.542	0.01282***

Ho: T-test determines whether the two samples are likely to have come from the same two underlying populations that have the same mean. We test if the average score for the Active group and average score of the non-Active group are equal. The result shows that we reject the null hypothesis at the 1% significance level. *** indicates 1% significance level.

Next, we run a regression analysis that includes students' overall grade point average as well as their major as control variables for performance. The results reported in Table 3 indicates that the variable, Dum, representing Active versus non-Active is statistically significant and positive with a t-statistic of 3.484, implying that students using the active approach performed better than the group without active review. The findings also show that GPA is positively associated with the assessment test scores with a t statistic of 3.048. We deduce from this relationship that students with higher GPAs were motivated to perform better on the test.

We also find that the students' majors did not influence the outcome of their test scores. Students majoring in accounting or finance did not score significantly better than others; and similar results exist for management and marketing majors.

Taken together, students perform better when active learning occurs, and higher GPA students achieve higher scores. While good students (higher GPA) will do better, these results show that the active learning approach is independent and statistically significant, indicating that all students benefit from active learning, regardless of GPA or major.

Table 3: Regression Analysis Results for Equation 1

Variables:	Coefficient Estimates	T-statistics
Intercept	-0.5222	-0.336
DUM	1.4788	3.484***
GPA	1.4835	3.048***
A&F	0.4792	0.780
Mang	0.8907	1.187
Mktg	-0.4001	-0.807
R^2	32.07%	
Observations	77	

Equation 1: $Score_i = \alpha + \beta_1 DUM_i + \beta_2 GPA_i + \beta_3 A\&F_i + \beta_4 Mang_i + \beta_5 Mktg_i + \epsilon_i$. *This table shows the regression estimates for the relationship between test score (SCORE) and whether active learning was used (DUM) or not, GPA, dummy variable for students' major in Accounting or Finance, Management or Marketing. Coefficient estimates and t statistics are shown in columns 2 and 3. ***, **, * denote statistical significance at the 1%, 5%, or 10% level.*

Finally, Table 4 presents the cognitive processing levels of each question using Bloom's Taxonomy, and compare the results of student test scores to its hierarch of learning. Using the Active group only, we attempt to determine whether this group show any difference in their cognitive skills for easier (level 1, remembering) questions versus the more difficult ones such as questions requiring students to analyze (level 4, analyzing). Table 4 presents the results.

Table 4: Impact of Active Approach on Learning Hierarchy of Bloom's Taxonomy

Panel A. Assessment Test Questions and Bloom's Taxonomy										
Row 1: Assessment Test question	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Row 2: Bloom's Taxonomy of Learning Level	2	3	1	3	4	2	2	1	4	4
Row 3: Number students who responded correctly to question	23	21	30	32	24	23	28	33	20	20
Row 4: Percentage answered correctly	0.511	0.467	0.667	0.711	0.533	0.511	0.622	0.733	0.444	0.444
Panel B. Correlation between "Number of students in Active Group Who Answered Correctly" and "Bloom's Taxonomy Level of Hierarchy"										
Correlation between:										
Number students who answered correctly and Bloom's Taxonomy	-0.66**									

Panel A assigns the hierarchical level from Bloom's Taxonomy to each of the ten multiple choice questions (Q1 to Q10) used in the Assurance of Learning exam. The exam questions were based on general managerial accounting concept. The exam questions are available upon request. Row 2 presents the Bloom's Taxonomy level of hierarchy (1-4) assigned to each question by the authors. Row 3 provides the number of students who responded correctly to each question, Q1 to Q10. Row 4 shows the percentage of correct responses.
Panel B presents the correlation coefficient between the data from Row 2 (Bloom's Taxonomy of Learning Level) and Row 3 (Number students who responded correctly to the question) of Panel A. The correlation is statistically significant at the 5% level. ***, **, and * indicate significance at the 1%, 5%, and 10%, respectively.

The results show that the correlation between the number of correct responses for each question and the level of cognitive processing is negatively correlated at -66%, indicating that the higher the cognitive levels the lower the test scores for the Active group. These results indicate that even if the active approach is used, learning to apply (level 3) and to analyze (level 4) are more difficult as compared to remember and apply terminologies and definitions (levels 1 and 2). Therefore, our results do not support the second hypothesis, H2.

CONCLUDING COMMENTS

This study examines the effect of a flipped classroom by comparing two samples, one that uses active learning review sessions for the AACSB International assurance of learning (AOL) tests and another group that do not. The findings indicate that scores for the group using the active learning method statistically outperformed the group that did not use active learning. This implies that the student performance increases in Managerial Accounting when they actively participate in an instructor led review sessions.

Further statistical tests using a regression analysis show that the Active group outperforms the non-Active ones with statistical significance at the 1% level. Also, overall GPA is also statistically significantly related to the results of the test scores. However, the students' majors did not have any effect. The results show that all students, regardless of GPA or major, benefit from the active learning method.

Examining the variation of test questions relative to Bloom's Taxonomy of cognitive process we find a strong negative correlation where a higher level of cognitive process is related to lower scores even when active learning is utilized. The student performance does not improve when learning more difficult Managerial Accounting concepts even when using the active approach. It would be helpful to further study the use of active learning in the higher levels of the hierarchy of learning in future studies.

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BIOGRAPHY

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IMPLICATIONS OF HARMONIOUS CORE COMPETENCIES SUGGESTED BY THE WSCUC, AACSB, AICPA AND PATHWAYS COMMISSION TO ACCOUNTING EDUCATORS

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ABSTRACT

This paper compares and analyzes the core competencies for undergraduate degrees suggested by the Western Association for Schools and Colleges (WASC) Senior College and University Commission (WSCUC), the Association to Advance Collegiate Schools of Business (AACSB), the American Institute of Certified Public Accountants (AICPA), and the Pathways Commission. Each set of these organizations' suggested core competencies are harmonized to one another. As a result, accounting faculty can simultaneously teach business students to attain learning objectives both at the institutional level and program level, as well as core competencies desired for accounting professionals. Accounting faculty can introduce and reinforce common sets of core competencies, suggested by various bodies, to undergraduate business students in lower and upper accounting courses of the Bachelor of Science in Business Administration (BSBA) program. Accounting faculty will certainly shoulder the responsibility of mastering undergraduate accounting students' in-depth knowledge of a major area (accounting) within the BSBA program.

JEL: M4

KEYWORDS: Core Competencies, Program Learning Objectives, Institutional Learning Objectives, Accreditation, AACSB, WSCUC, AICPA, the Pathways Commission

INTRODUCTION

Authors of this paper work at a disciplinary accredited College of Business and Economics (CBE) residing within a regionally accredited University. The University is regionally accredited by the Western Association for Schools and Colleges (WASC) Senior College and University Commission (WSCUC). The CBE has been accredited by the Association to Advance Collegiate Schools of Business (AACSB) since 1973. To avoid repetition, any reference made to the University and CBE in the remainder of the paper refers to an affiliation with the authors' place of work. On day one of an academic year, a parent asked one of the authors the question, "if my son attends your accounting program, will my son pass the CPA Examination?" The author responded with the following, "though passing the CPA Examination is important, accounting education is more about attaining the core competencies of the accounting profession." The above conversation highlights the difficulties and challenges faced by the accounting faculty. Often an accounting program is judged by its passing rate of the Certified Public Accountants (CPA) Examination and its placement of students into the 'Big Four' accounting firms, firms with high recognition within their industry. Nevertheless, accounting faculty operate within a challenging environment. Faculty are required to simultaneously maintain standards to

satisfy both the University regional accreditation, such as the WSCUC, as well as the CBE specific accreditation, such as the AACSB. Both the WSCUC and AACSB have their own unique set of standards. Accounting faculty not only need to teach accounting students curriculum that will allow them to be prepared to pass the CPA examination, they must also teach students to (1) to be proficient in learning outcomes set by the university, known as institutional learning outcomes (or ILOs) to satisfy WSCUC, (2) be proficient in learning objectives set by the college, known as program learning objectives (or PLOs) to satisfy AACSB, (3) be proficient in the Pathways Commission's core competencies, and (4) be proficient in the AICPA's core competencies. If the core competency sets promulgated by these organizations conflict with one another, the challenges of implementation faced by accounting faculty will go well beyond teaching the accounting curriculum.

Prior literature on the topic of WSCUC accreditation, AACSB accreditation, Pathways Commission, and the AICPA core competency framework are often found in multiple works. Missing is analysis comparing and contrasting the different sets of core competencies suggested across multiple accrediting and standard holding bodies.   This paper addresses two research questions. The first research question is whether the guidance of core competencies to achieve learning outcomes and objectives from various regulatory and professional bodies, such as the WSCUC, AACSB, Pathways Commission, and the AICPA, conflict with one another. The second research question is whether accounting faculty can synchronically teach business students institutional and program learning objectives, as well as core competencies that are specifically pertinent to accounting professionals. The first research question is addressed by analyzing the core competencies suggested by the WSCUC (2013), AICPA (1999), and Pathways Commission (2015) respectively; together with the general skills suggested by the AACSB (2013). This paper finds that there are thirteen different types of core competencies and general skills separately described in the WSCUC (2013), AACSB (2013), AICPA (1999) and Pathways Commission (2015). Table 3 shows that the different sets of core competencies suggested by various bodies (1) are harmonized to one another, and (2) are similar in having the following common core competencies and general skills: (a) analytical and critical thinking; (b) communication; (c) diversity; (d) human relation and teamwork; (e) in-depth knowledge of a major areas; (f) knowledge of other areas; (g) ethics and social responsibility; (h) quantitative methods, and (i) technology information and literacy.

The second research question is addressed by comparing the authors' University's ILOs and CBE's PLOs to the core competencies or general skills suggested by the various accrediting bodies mentioned. This paper finds the authors' University's ILOs and the CBE's PLOs covered not only the majority of the core competencies suggested by WSCUC and general skills suggested by AACSB, but also the core competencies suggested by AICPA and the Pathways Commission. As a result, accounting faculty can simultaneously teach business students to attain learning objectives both at the institutional level and program level, as well as core competencies desired for accounting professionals. Harmonization of core competencies or general skills suggested by various bodies suggests that accounting faculty can introduce, reinforce, or master particular core competencies in a lower or upper division accounting course. This paper describes how each of the thirteen different core competencies and general skills, described in the WSCUC (2013), AACSB (2013), AICPA (1999) and Pathways Commission (2015), is introduced, reinforced, and mastered in a particular accounting course.   The following section presents a literature review of core competencies. The third section presents the data and methodology. The fourth section consists of results and findings, followed by a discussion around a path forward for the academic community in the fifth section. The last section of this paper discusses limitations, implications, and conclusions for future research.

LITERATURE REVIEW

The Western Association for Schools and Colleges (WASC) Senior College and University Commission (WSCUC) 2013 handbook of accreditation is the official guidelines for all Universities to compile with

when seeking accreditation from WSCUC. The WSCUC 2013 handbook (WSCUC, 2013) describes the core competencies that should be developed by an undergraduate program. In 2013, the Association to Advance Collegiate Schools of Business (AACSB) issued the Eligibility Procedures and Accreditation Standards for Business Accreditation (AACSB, 2013a). The Eligibility Procedures and Accreditation Standards for Business Accreditation (AACSB, 2013a) suggest the general skills that should be developed by an undergraduate business program. In 2013, the Association to Advance Collegiate Schools of Business (AACSB) issued the AACSB Assurance of Learning Standards: An Interpretation AACSB White Paper No. 3 (AACSB, 2013b). The AACSB White Paper No. 3 is a good source in regards to assurance of learning. Shaftel and Shaftel (2007) is an example of an academic article discussing educational assessment and the AACSB. The AICPA core competency framework for entry into the accounting profession of the American Institute of Certified Public Accountants (AICPA) "defines a set of skills-based competencies needed by all students entering the accounting profession, regardless of the career path they choose (public/industry/government/nonprofit) or the specific accounting services they will perform (AICPA, 1999)." There are ample publications discussing the AICPA core competency framework such as Kaciuba (2012). Black (2012) and Behn et. al. (2012) describe in detail activities of the Pathways Commission in accounting education. In November 2015, the Pathways Commission issued the report titled "In Pursuit of Accounting's Curricula of the Future" (Pathways Commission, 2015). Appendix A of the mentioned above report issued by the Pathways Commission (2015) outlines the Pathways Common Body of Knowledge Learning Objectives which includes (1) accounting competencies, (2) professional foundational competencies, and (3) broad management competencies. The Following Section Discusses Data and Methodology

DATA AND METHODOLOGY

As stated previously, this paper analyzes two research questions: (1) whether learning outcomes and objectives from various regulatory and professional bodies, such as the WSCUC, AACSB, Pathways Commission, and the AICPA, conflict with one another, and (2) whether accounting faculty can synchronically teach business students institutional and program level learning objectives, as well as core competencies pertinent to accounting professionals. In order to address both research questions, the authors (1) map their University's ILOs to the core competencies of WSCUC 2013 handbook, (2) map their CBE's PLOs to the general skills stated in the 2013 AACSB Standards, and (3) compare the AICPA Core Competency Framework to those of WSCUC and AACSB, and (4) compare the core competencies suggested by the Pathways Commission to those of WSCUC and AACSB. According to the WSCUC 2013 handbook, "the WSCUC process begins by calling upon institutions to ground their activities in three Core Commitments (WSCUC, 2013)." The three core commitments are (1) commitment to student learning and successes, (2) commitment to quality and improvement, (3) commitment to institutional integrity, sustainability and accountability. Institutions must also demonstrate that they are in compliance with the four standards and criteria for review, in order to become and remain accredited (WSCUC, 2013). For example, Standard 2.2a states, "undergraduate programs engage students in an integrated course of study of sufficient breadth and depth to prepare them for work, citizenship and life-long learning. These programs ensure the development of core competencies including, but not limited to... (WSCUC, 2013)." The core competencies suggested by the 2013 handbook include, but are not limited to, eleven traits: (1) written communication, (2) oral communication, (3) quantitative reasoning, (4) information literacy, (5) critical thinking, (6) creativity and innovation, (7) appreciation for diversity, (8) ethical and civic responsibility, (9) ability to work with others, (10) knowledge of things critical, aesthetic, social, political, scientific and technological, (11) in-depth knowledge of a major area such as accounting (WSCUC, 2013). Table 1 outlines the University's ILOs for all degree recipients. By matching the University's ILOs in Table 1 to the core competencies suggested by WSCUC, the authors found the University has been following WSCUC's suggestion of requiring students to practice lifelong learning and community engagement. Through its ILOs, the University has been preparing students to master most of the core competencies suggested by WSCUC.

Table 1: University Institutional Learning Outcomes (ILOs)

ILOs	Description of the University Institutional Learning Outcomes
ILO 1	Graduates of the University will be able to think critically and creatively apply analytical and quantitative reasoning to address complex challenges and everyday problems.
ILO 2	Graduates of the University will be able to communicate ideas, perspective, and values clearly and persuasively while listening openly to others.
ILO 3	Graduates of the University will be able to apply knowledge of diversity and multicultural competencies to promote equity and social justice in our communities.
ILO 4	Graduates of the University will be able to work collaboratively and respectfully as members and leaders of diverse team and communities.
ILO 5	Graduates of the University will be able to act responsibly and sustainably at local, national, and global levels.
ILO 6	Graduates of the University will be able to demonstrate expertise and integration of ideas, methods, theory and practice in a specialized discipline of study.

Table 1 outlines the University's ILOs for all degree recipients. By matching the University's ILOs in Table 1 to the core competencies suggested by WSCUC, the authors found the University has been following WSCUC's suggestion of requiring students to practice lifelong learning and community engagement. Through its ILOs, the University has been preparing students to master most of the core competencies suggested by WSCUC.

The authors now compare the skill areas suggested by AACSB to the core competencies recommended by the WSCUC. On April 8, 2013, AACSB issued its "Eligibility Procedures and Accreditation Standards for Business Accreditation (AACSB, 2013)." In this document, Standard 9 states curriculum content is not the same as learning goals. Standard 9 defines curriculum content as "the theories, ideas, concepts, skills, knowledge, etc., that make up a degree program (AACSB, 2013)" The standard further goes on to state "learning goals describe the knowledge and skills students should develop in a program and set expectations for what students should do with the knowledge and skills after completing a program. Not all content areas need to be included as learning goals (AACSB, 2013)."

Standard 9 of the Business Accreditation Standards by AACSB suggests eight types of general skill areas that would normally be part of the learning experiences in all general management and specialist degree programs at the bachelor's level. These eight types of general skill areas consist of the following (1) written and oral communication, (2) ethical understanding and reasoning, (3) analytical thinking, (4) information technology, (5) interpersonal relations and teamwork, (6) diverse and multicultural work environments, (7) reflective thinking, and (8) application of knowledge (AACSB, 2013).

The core competencies suggested by WSCUC include critical thinking, while the general skills suggested by the AACSB include analytical and reflective thinking. Though different terminology (critical thinking, analytical and reflective thinking), both of the identified skill sets from WSCUC and AACSB are similar.

CBE has eight undergraduate BSBA program learning objectives (PLOs) for assessment (Table 2). Through its PLOs, CBE has been preparing students to master most of the general skills suggested by AACSB. PLO 1A and 1B are aimed at students' skills of critical thinking, reflective thinking and integration of knowledge across functional areas. PLO 2A and 2B are aimed at students' skills of analytical thinking and information technology. PLO 3A, 3B and 3C are targeting students' skills of written communication, oral communication, diversity, interpersonal relations and teamwork. Lastly, PLO 4A is targeting students' ethical understanding and reasoning.

Table 2: College of Business and Economics (CBE) Undergraduate (BSBA) Program Learning Objectives (PLOs)

PLOs	Description of CBE BSBA Program Learning Objectives
PLO 1A	Students who graduate from the CBE will recognize and integrate foundation knowledge across functional areas.
PLO 1B	Students who graduate from the CBE will apply critical thinking skills to solve business problems.
PLO 2A	Students who graduate from the CBE will understand and apply quantitative methods and tools in evaluating business problems and making effective business decisions.
PLO 2B	Students who graduate from the CBE will apply technology to analyze data and provide solutions to business problems.
PLO 3A	Students who graduate from the CBE will apply effective oral communications skills in a diverse and global environment.
PLO 3B	Students who graduate from the CBE will apply effective written communication skills in a diverse and global environment.
PLO 3C	Students who graduate from the CBE will apply effective team skills to work in a diverse and global environment.
PLO 4A	Students who graduate from the CBE will identify and assess ethical issues and properly articulate ethical decisions.

CBE has eight undergraduate BSBA program learning objectives (PLOs) for assessment indicated in the above Table 2. Through its PLOs, CBE has been preparing students to master most of the general skills suggested by AACSB. PLO 1A and 1B are aimed at students' skills of critical thinking, reflective thinking and integration of knowledge across functional areas. PLO 2A and 2B are aimed at students' skills of analytical thinking and information technology. PLO 3A, 3B and 3C are targeting students' skills of written communication, oral communication, diversity, interpersonal relations and teamwork. Lastly, PLO 4A is targeting students' ethical understanding and reasoning.

Even if both WSCUC and AACSB are suggesting similar core competencies and general skills for the undergraduate programs, the accounting profession might still demand a different set of core competencies for students. The AICPA core competency framework advocates a skills-based curriculum and has three components of competencies. These three components are (1) functional competencies, (2) personal competencies and (3) broad business perspective competencies (AICPA, 1999). Functional competencies are similar to WSCUC's requirement of in-depth knowledge of a major area and are the application of accounting knowledge. The personal competencies of AICPA's core competence framework suggest the following desirable attitudes and behaviors of an accounting student: (1) professional demeanor, which means an accountant should demonstrate objectivity, integrity and ethical behavior, (2) professional solving and decision-making, which means an accountant should possess critical thinking and problem-solving skills and be able to make good judgments for decision-making, (3) interaction, which means an accountant should be able to work with others in a diverse business environment, (4) leadership; (5) communication, (6) project management, and (7) leverage technology (AICPA, 1999). From looking at the listed competencies, AICPA recommends skills similar to core competencies or general skills suggested by WSCUC and AACSB. These include ethics, critical thinking, teamwork, diversity, communication and technology.

The broad business perspective competencies of AICPA's core competence framework emphasize the importance of mastering critical thinking skills. AICPA refers to strategic and critical thinking skills when stating "critical thinking encompasses the ability to link data, knowledge, and insight together from various disciplines to provide information for decision-making" (AICPA, 1999). According to AICPA's broad business perspectives competencies, accounting students should learn to consider the following business perspective when making decisions: (1) industry/sector perspective, (2) international/global perspective, (3) resources management, (4) legal/regulatory perspective, (5) marketing, and (6) technology. The emphasis AICPA places in linking data and knowledge of business perspectives for decision-making is similar to the AACSB's requirement of application of knowledge (AACSB, 2013). A new format of the CPA exam was launched on April 1, 2017, which tests accounting students' skills of analysis, judgment, communication, research, and understanding of the knowledge. It is highly possible for a candidate to fail the CPA examination if the candidate does not master the core competencies

suggested by AICPA. Accounting faculty should adopt best practices of accounting curricula proposed by the Pathways Commission (The Pathways Commission, 2015).

In November 2015, the Pathways Commission issued the report titled "In Pursuit of Accounting's Curricula of the Future" (Pathways Commission, 2015). The Pathways Commission's Task Force of Knowledge and Pedagogy developed the Pathways Commission Common Body of Knowledge learning objectives (Pathways Commission, 2015, 6). Lawson et al. (2014) categorize the Pathways Commission Common Body of Knowledge learning objectives, intended for undergraduate accounting education, into three areas: (1) accounting competencies, (2) professional foundational competencies, and (3) broad management competencies. Details of how the Pathways Commission Body of Knowledge learning objectives are mapped to the learning levels of Bloom's taxonomy can be found in Appendix A of the Pathways Commission (2015). Ideally, accounting faculty should adopt technology-enabled pedagogies to deliver a robust curriculum that develops students' professional judgment and skepticism (Pathways Commission, 2015). The learning objectives, within the professional foundational competencies of the Pathways Commission's common body of knowledge, include (1) communication, (2) quantitative method, (3) analytical thinking, (4) human relations, and (5) technology (Pathways Commission 2015). Similar to the professional foundational competencies of the Pathways Commission, the core competencies suggested by WSCUC also contain similar traits of communication, quantitative reasoning, critical thinking, and ability to work with others (WSCUC, 2013). The general skills suggested by AACSB contain parallel traits to competencies suggested by the Pathways Commission and WSCUC, traits such as communication, ethical reasoning, analytical thinking, teamwork, and information technology (AACSB, 2013). The Next Section Discusses the Results

RESULTS

Table 3 matches University ILOs and CBE PLOs to core competencies or general skills suggested by WSCUC (2013), AACSB (2013), AICPA (1999), and the Pathways Commission (2015). Table 3 demonstrates two interesting phenomena. The different sets of guidelines have the following common skill sets: (a) oral and written communication, (b) quantitative method, (c) critical thinking or analytical thinking or reflective thinking for problem solving, (d) human relations or the ability to work with others or teamwork, (e) technology, (f) organizational ethics and social responsibility, (g) in-depth knowledge of a major area, and (h) knowledge of other business academic areas. Table 3 also shows University ILOs and CBE PLOs require students to learn skills (a) through (h) plus an additional learning outcome/objective, diversity. The guidelines from the various above-mentioned bodies all suggest the importance for accounting students to possess knowledge of other business academic areas such as the broad management competencies of the Pathways Commission (2015). The need for accounting students to be knowledgeable of other business academic areas, such as management, finance, marketing, and human resources, highlights the fact that an accounting major option must be built within a solid BSBA degree program. Assurance of learning at the BSBA program level is built on continuous improvement of student learning across the curriculum and not confined to learning within any single subject-focused course. Shaftel and Shaftel (2007) do not "attempt to interpret what the ACCSB means or offer regulatory guidance that the ACCSB avoids." Benn et al. (2012), while describing the seven recommendations for change in accounting education issued by the Pathways Commission, also note their systemic interdependence. Similarly, our intention in this paper is not to dissect or add new interpretations to what the WSCUC, AACSB, AICPA and the Pathways Commission state in their respective guidelines. Instead, our purpose is to compare the skills and core competencies suggested by various bodies to consider how they can be inter-related and harmonized while respecting that each of these sets of guidelines retains their own distinct logic as an integrated system.

Table 3: Mapping University Institutional Leanings Outcomes (ILOs) and CBE Program Learning Objectives (PLOs) to Core Competencies and General Skills of Various Regulatory Bodies

Core Competencies & General Skills	WSCUC (2013)	AACSB (2013)	AICPA (1999)	Pathways (2015)	ILOs	PLOs
1. Analytical Thinking/Problem Solving		X	X	X	X	X
2. Communication Written and Oral	X	X	X	X	X	X
3. Critical Thinking/Reflective Thinking	X	X	X		X	X
4. Diversity	X	X	X	X	X	X
5. Governance/Compliance/Risk Management				X		
6. Human Relation/Teamwork	X	X	X	X	X	X
7. In-depth Knowledge of a Major Area	X	X	X	X	X	X
8. Knowledge of Other Areas	X	X	X	X	X	X
9. Leadership			X	X		
10. Process Management and Improvement/ Creativity/ Innovation	X		X	X		
11. Organizational Ethics/ Social Responsibility	X	X	X	X	X	X
12. Quantitative Methods	X	X	X	X	X	X
13. Technology Literacy/Technology Information	X	X	X	X	X	X

Table 3 matches University ILOs and CBE PLOs to core competencies or general skills suggested by WSCUC (2013), AACSB (2013), AICPA (1999), and the Pathways Commission (2015). Table 3 demonstrates two interesting phenomena. The different sets of guidelines have the following common skill sets: (a) oral and written communication, (b) quantitative method, (c) critical thinking or analytical thinking or reflective thinking for problem solving, (d) human relations or the ability to work with others or teamwork, (e) technology, (f) organizational ethics and social responsibility, (g) in-depth knowledge of a major area, and (h) knowledge of other business academic areas. Table 3 also shows University ILOs and CBE PLOs require students to learn skills (a) through (h) plus an additional learning outcome/objective, diversity.

We now discuss the major implication of having harmonized guidelines from various bodies. Accounting faculty, while teaching accounting students to meet AICPA's core competency framework, are simultaneously teaching accounting students to learn a majority of the competencies or skills suggested by WSCUC, AACSB, and the Pathway Commission. In this regard, accounting faculty are contributing to the improvement of all business students in meeting undergraduate institutional learning outcomes and college program learning objectives. Table 4 describes how each of the thirteen different core competencies and general skills, separately described in the WSCUC (2013), AACSB (2013), AICPA (1999) and Pathways Commission (2015), is introduced and reinforced to business students in which level or a particular accounting course. The core competencies of analytical thinking, critical thinking and problem solving are first introduced to business students in lower level introduction to accounting courses, and reinforced to accounting students in upper level intermediate accounting courses. Prior literature such as Young and Warren (2011) argue that critical thinking skills should be taught in the introductory accounting courses. Johnstone et al. (2013) developed a case for critical thinking, which is suitable for use in introductory accounting. Springer and Borthick (2007) recommend accounting faculty to deploy cognitive conflict tasks to develop students' higher-order skills.

The core competencies of written and oral communication are first introduced to business students in lower level introduction to accounting courses and reinforced to accounting students in upper level accounting courses. When business students enroll in the introduction to accounting courses, they often practice writing small paragraphs in their homework and also practice in-class oral presentations and discussions. Comparatively, accounting students practice written communication more in auditing and accounting ethics courses than in intermediate financial accounting courses. Accounting students practice oral communication skills in-group projects in most accounting courses. Miller and Stone (2009) highlight "public speaking is an important determinant of professional accounting success."

Table 4: Mapping Accounting Courses to Core Competencies and General Skills of WSCUC (2013), AACSB (2013), AICPA (1999), and Pathways Commission (2015)

Core Competencies and General Skills	Accounting Courses Mapped
1. Analytical Thinking/ Problem Solving	Introduced in lower division accounting courses Reinforced in upper division accounting courses
2. Communication Written and Oral	Introduced in lower division accounting courses Reinforced in upper division accounting courses
3. Critical Thinking/ Reflective Thinking	Introduced in lower division accounting courses Reinforced in upper division accounting courses
4. Diversity	Introduced in group projects of accounting courses
5. Governance/Compliance/Risk Management	Introduced in Auditing I and reinforced in Auditing II
6. Human Relation/ Teamwork	Introduced and reinforced in group projects of accounting courses
7. In-depth Knowledge of a Major Area	Mastered in upper division accounting courses
8. Knowledge of Other Areas	Introduced and reinforced in courses (other than accounting) of the BSBA program
9. Leadership	Introduced and reinforced in VITA
10. Process Management and Improvement/ Creativity/ Innovation	Introduced and reinforced in courses (other than accounting) of the BSBA program
11. Organizational Ethics/ Social Responsibility	Introduced in lower division accounting courses Reinforced in upper division Accounting Ethics and Auditing I and II
12. Quantitative Methods	Introduced in lower division accounting courses Reinforced in upper division accounting courses
13. Technology Literacy/ Technology Information	Introduced in lower division accounting courses Reinforced in Accounting Information Systems

Table 4 describes how each of the thirteen different core competencies and general skills, separately described in the WSCUC (2013), AACSB (2013), AICPA (1999) and Pathways Commission (2015), is introduced and reinforced to business students in which level or a particular accounting course. This table maps accounting courses to core competencies and general skills of WSCUC (2013), AACSB (2013), AICPA (1999), and Pathways Commission (2015).

Weisenfeld and Robinson-Backmon (2007) describe the importance of diversity in the working environment especially in institutions such as higher education. Group projects of accounting courses often foster the core competency of diversity. When business students enroll in introduction to accounting courses, they often have small group projects such as in-class exercises of reading financial statements. Group projects also help to develop business students' core competencies of human relation and teamwork. Accounting students further reinforce their core competencies of diversity, human relation and teamwork in their group projects of upper level accounting courses. Prior literature such as Thomas (2012) and Liu et. al. (2012) highlight the importance of teaching ethics to all business students especially accounting students. The core competencies of ethics and social responsibility are first introduced to business students in the introduction to management course. When business students enroll in the introduction to management course, they will study the Statement of Ethical Professional Practice (SEPP) of the Association of Accountants and Financial Professionals in Business (IMA). Accounting students will reinforce their core competencies of ethics and social responsibility in auditing and accounting ethics courses. Accounting students often study the AICPA Code of Professional Conduct (2014) and the Code of Ethics for Professional Accountants (2016) of the International Ethics Standards Board for Accountants (IESBA). Accounting requires quantitative skills.

The core competency of quantitative methods and technology information/literacy are introduced to business students in the introduction to accounting courses and reinforced in the accounting information systems course. Though the accounting information systems course is designed for students majoring in accounting, it is not uncommon for business students, with major in other areas such as marketing, to enroll in the course. Appendix B of the report issued by the Pathways Commission (2015) titled "In Pursuit of Accounting's Curricula of the Future" list the top 25 technologies identified by Academic and

Practitioner Focus Group of the Pathways Commission in 2014. Accounting faculty, of the accounting information systems course, in CBE are teaching the top ranking technologies (Pathways Commission, 2015) such as (1) electronic spreadsheets, (2) business intelligence and analytics technologies such as Tableau, and (3) database management software. Last, accounting students practice the core competency of leadership in the volunteer income tax assistance (VITA) course. Accounting students practice leadership in themselves by completing tax returns for clients. The next session is concluding comments. The next section presents thoughts on how the academic community might move forward in a positive direction.

A Path Forward

Accounting faculty should embrace the idea of teaching business students to attain learning objectives both at the institutional level and program level, as well as core competencies desired for accounting professionals simultaneously. In doing so, accounting faculty should actively participate in the discussion of aligning the mission of the accounting department to the Program Learning Objectives of the College and the Institutional Leanings Outcomes of the University. Further, accounting faculty should stimulate Life Long Learning (LLL) in business and accounting students (Cliath et. al. 2000).   The goal is to create a learning environment that promotes the skills needed for life-long learning. Because life-long learning is a difficult concept to operationalize and resistant to measurement, the objectives for this learning goal refer primarily to the learning opportunities provided to students by the accounting department and the CBE.

The learning opportunities provided to students under the concept of Life Long Learning (LLL) include but not limited to the following: (1) learning will take place in the context of authentic and complex accounting and business problems, (2) students will have extensive opportunities to learn in team settings and to develop effective team skills, (3) students will have the opportunity to develop the ability effectively to research information in furtherance of learning, (4) students will have the opportunity to develop a critical mindset: collect, analyze information, evaluate their reliability, prioritize them, classify them, synthesize them to develop an argument. Within the functional area of accounting, the approach of "Learn how to learn accounting" is clearly to help accounting students to become life-long learners in accounting. Even though the accounting discipline has its own distinctive professional standards to teach students who major in accounting, such as the generally accepted accounting principle in the United States (GAAP), the accounting department functions within a BSBA program of the College and is part of the University. Integration of knowledge across different functional areas to analysis a business decision critically is an important skill set for all contemporary business leaders. An expert in accounting also needs to know other functional areas of knowledge. Accounting faculty, therefore, needs to work collegially with faculty of all other disciplines, under the same roof, to teach business students to attain Life Long Learning in all business functional areas.

CONCLUDING COMMENTS

When we compare the competencies and skill sets that form the core of standards of WSCUC, AACSB, AICPA and the Pathways Commission, we find that their seemingly different requirements are in fact highly congruent. This paper contributes to the literature by (1) demonstrating that the core competencies or general skills suggested by the WSCUC, AACSB, AIPCA and Pathways Commission are harmonized to one another, (2) demonstrating how accounting faculty can introduce, reinforce, and master a particular core competency or general skills to a particular accounting course, (3) demonstrating that accounting faculty can simultaneously teach business students to attain learning objectives both at the institutional level and program level, as well as core competencies desired for accounting professionals. Different Universities have different ILOs while different Business Schools have different PLOs. Though this paper's discussion is limited only to the University and the CBE where the authors associated with, the

findings discussed in this paper is generalizable. For example, this paper finds that there are in total thirteen different types of core competencies and general skills separately described separately in the WSCUC (2013), AACSB (2013), AICPA (1999) and Pathways Commission (2015). Further, the description in this paper of how a particular core competency is introduced and reinforced to business students in a particular accounting course is generalizable to other Schools of Businesses. There are ample of future research opportunities. For example, the authors are currently examining how business students can improve their analytical thinking and problem solving skills by learning to use analytics technologies such as Tableau.

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THE PINK BALANCE SHEET: AN EASY WAY TO TEACH CAPITAL STRUCTURE BASICS

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ABSTRACT

Students of corporate finance must learn the basics of capital structure theory. However, most textbook discussions are confusing and include too many equations. We present a simple model of tax-related capital structure basics that incorporates only three components: a market-value balance sheet, colors that represent risk, and one equation. Students mastering the pink balance sheet should be able to remember easily the various implications of basic capital structure models, including beta relationships such as the Hamada equation.

INTRODUCTION

"Debt can be an asset." So says the Henry Kravis character in HBO's 1993 movie *Barbarians at the Gate* (HBO, 1993). His point was that debt "tightens a company," since required debt service reduces the free cash flow available for managers to appropriate (Jensen, 1986). In basic corporate finance courses, students learn about another way that debt can be an asset: if the firm is taxed, the tax shield created by interest payments can raise company value.

Managers trying to create value for their shareholders wish to choose their mix of debt and equity—their capital structures—to optimize the value of the interest tax shield. The implications of the firm's financing choices on the value and risk of its equity are extremely important for corporate financial managers, and therefore they form an integral part of the basic corporate finance curriculum for business students. This curriculum proceeds in a very structured way, and has for the last thirty years. However, while the textbook approach to capital structure is highly standardized, it is also highly opaque: there are far too many equations and far too little emphasis on the most fundamental ideas. Engagement on both sides of the classroom can devolve into "some people said capital structure was irrelevant, but it's not." It does not have to be this way.

In this paper, we present a simple framework of only three concepts that will help students master the canonical tax-related models of capital structure. Once students know this material, it will be easier for them to learn enhancements based on asymmetric information, agency costs, and control issues.

The concepts we use are not original, but our user-friendly package is. It should help students develop an intuitive appreciation for the basics of capital structure—or at least a better grasp than they can get from the standard textbook presentation. The pink balance sheet approach simplifies capital structure pedagogy by explicitly identifying the two types of assets that a taxed firm has, highlighting the contribution of the interest tax shield; by providing a visual representation of risk; and by using a single framework equation rather than dozens of case-specific expressions. In both undergraduate and graduate corporate finance

courses, I have found this approach to facilitate the capital structure discussion considerably, and to improve students' understanding and retention of the ideas.

The paper proceeds as follows. After a literature review, we present the pedagogical framework. We then apply it to the fundamental models of capital structure. Before concluding, we provide two brief example applications.

LITERATURE REVIEW

The pink balance sheet is a simplified and intuitive approach to teaching students how a firm's debt/equity mix affects its value. It is therefore based on the academic capital structure literature, and it is a response to the rather muddled textbook attempts to cover that literature. In this section, we consider both elements: first the literature itself, and then traditional textbook coverage.

The Capital Structure Canon

A survey of the canonical capital structure literature would usually start with Modigliani and Miller (MM, 1958), since "[s]urveys of the theory of optimal capital structure always start with the Modigliani and Miller (1958) proof that financing doesn't matter in perfect capital markets" (Myers, 2001). However, we instead will start with common extensions of MM's work (both the 1958 irrelevance theorem and the 1963 extension incorporating taxes), because we discuss MM at length in the next section.

MM do not consider personal taxes, so Miller (1977) does. He shows that MM's (1963) prediction of extreme leverage—a consequence of the tax shield created by debt financing—is mitigated when investors face higher personal tax rates on debt than on equity.

Other theories also attempt to moderate MM's predictions. Harris and Raviv (1991) review asymmetric information, agency costs, and corporate control theories. Myers (2001) adds a review of tax-motivated "trade-off" theories, in which firms balance leverage gains against costs of financial distress. He concludes that while taxes tactically affect financing choices, there is little evidence that interest tax shields materially increase firm value.

Bradley, Jarrell, and Kim (1984) call the trade-off theories the "general academic view of the 1970s." Their own model—"the modern balancing theory of optimal capital structure"—incorporates the full range of contemporary adjustments to MM (1958): personal taxes on both debt and equity, bankruptcy costs, agency costs, and the availability of non-debt tax shields. They predict, and find, that leverage decreases with increasing costs of financial distress and variability of firm value.

These "balancing" theories are often easier to understand than the equations spawned by the tax-related theories, so the pink balance sheet focuses on the latter. We therefore must consider two other approaches concerned with the proper valuation of the interest tax shield: Myers' (1974) adjusted present value (APV), and Miles and Ezzell's (1980) adjusted discount rate.

Myers' (1974) APV framework breaks project value into an all-equity base case plus adjustments for financing and project interaction effects. Myers highlights the importance of a constant market-value leverage ratio to the validity of the textbook WACC equation, and he explains that maintaining this ratio means that tax shields are not riskless. This is a critical point for students, and it is developed further in Miles and Ezzell (1980).

Miles and Ezell (1980) "clarify" the textbook WACC's role in valuing projects of any length, showing that WACC can be used to discount unlevered cash flows to obtain (levered) value. The critical issue is not

length, but debt rebalancing: WACC requires that debt is rebalanced to maintain a constant debt/value ratio. Thus, even "though the firm might issue riskless debt, if financing policy is targeted to realized market values, the amount of debt outstanding in future periods is not known with certainty (unless the investment is riskless) and, consequently, the magnitude of the tax shields cannot be known with certainty" (p. 721). (Myers, 1974, p. 22, agrees: even if a given tax shield is safe, a constant D/A implies that "the aggregate value of the instruments obtainable is uncertain. We have in effect a compound lottery; the fact that the second stage is risk-free does not mean that the lottery itself is safe.") This insight is critical for students learning how to unlever and relever betas, as we discuss below.

In their 1983 paper, Ezzell and Miles reconcile the APV and WACC approaches to capital budgeting. They show that while APV discounts all tax shields at the cost of debt, WACC does so only for the first period; all future shields are discounted at the rate appropriate for the operating assets. Their "modified APV" approach leads to an intimidating weighted average discount rate that we suggest introductory students ignore.

Harris and Pringle (1985), however, offer a more user-friendly option. They decompose the textbook WACC equation into an operating component and a tax shield-related component. Defining the former as the discount rate applicable to the firm if it were unlevered makes it straightforward to estimate the required returns for projects whose risks are different from average: find the operating piece using a comparable pure-play firm, then use the debt ratio that is optimal for the target project.

Harris and Pringle (1985) focus on the asset side of the balance sheet. They use their operating asset rates to value a firm's interest tax shields, using the models of MM (1963), Miller (1977), and Miles-Ezzell (1980). While their approach is pedagogically beautiful, their focus on operating cash flows leads to equations for the unlevered cost of equity, rather than for the levered cost (as is standard in textbooks). They also do not distinguish total assets from operating assets when examining the market-value balance sheet. We provide both of those enhancements in this paper.

Having described the underlying literature, we now consider how several popular introductory textbooks cover these tax-related capital structure theories.

<u>The Traditional Textbook Approach to Presenting Capital Structure</u>

Finance "students" include those preparing for the Chartered Financial Analyst (CFA) exams. Level I of the CFA curriculum is arguably comparable to a finance undergraduate curriculum, so its coverage should include the essential corporate finance topics.   However, in 2012, Level I covered beta unlevering/relevering using only the Hamada equation (Courtois, *et al.*, 2012). Starting with portfolio beta, the authors simply multiply all debt terms by (1-T), "due to interest deductibility"; they then "assume that a company's debt does not have market risk," which leads them to the Hamada equation. They wrap up by presenting four versions of this same equation, solving for both levered and unlevered betas, for both firms and projects. Presenting the same structural relationship four different ways obscures the point and sows confusion.

As for students in traditional undergraduate programs, they have long used "Brigham books" in introductory finance courses. A recent iteration, Brigham and Daves (2013), devotes two chapters to capital structure. The first covers MM (1958, 1963) and Miller (1977), and presents the Hamada equation. These sections alone merit seven equations, even without Proposition II. The authors save that relationship for the second chapter—a chapter that presents 14 equations as it delves into the same three papers. This chapter also presents the Ehrhardt and Daves (2002) growth-adjusted model (which we discuss below), requiring another seven equations. Although some of these are repeats or rearrangements, the sheer number of equations is overwhelming.

Titman and Martin's (2016) sophisticated cost of capital chapter requires 12 numbered (and more unnumbered) equations. They include a brilliant "technical overview" that is the clearest exposition of the market value balance sheet that may exist in the textbook universe. However, even they fall prey to rearrangement-of-equations mania, and they pay more attention to the Ezzell and Miles (1983) refinement than most students will appreciate.

Now, the big kahuna. Brealey and Myers have been defining corporate finance education for decades. Brealey, Myers, and Allen's (BMA, 2014) eleventh edition of *Principles of Corporate Finance* is now the standard-bearer.

BMA devote three chapters to cost of capital issues. Chapter 17 goes through MM's (1958) arbitrage proof of irrelevance, describing propositions I and II. It shows that the beta of assets equals a weighted average of claims' betas. It compares MM's views on the effects of leverage to those of "traditional" approaches. Chapter 18 then turns to the value of the tax shelter: how large MM (1963) said it was; how Miller (1977) used personal taxes to predict it was smaller; how the "trade-off" theory incorporates costs of financial distress; and how the pecking order theory incorporates the interactions of the firm's internal cash flows and project opportunities. Bottom line: "Is there a theory of optimal capital structure? No."

The chapter most relevant for this paper is 19, especially the coverage of unlevering and relevering an equity beta. This chapter has 24 footnotes, one of which has 11 equations in it. They cover MM (1963), Myers (1974), Miles and Ezzell (1980), and Hamada (1972). More tellingly, they include "some final advice," "tricks of the trade," and "your questions answered" sections—clear evidence that they believe that they have left the waters muddied.

Our approach handles the same material with one main equation, one picture, and some colors. We describe our "pink balance sheet" approach in the next section.

THE PINK BALANCE SHEET

Our approach to teaching basic capital structure has three parts:

1. a market value balance sheet
2. colors for each piece of the balance sheet, representing relative risk
3. one equation, that comes from MM (1963)

None of these is original. However, students should benefit from this particular combination, which focuses on the big, underlying concepts rather than on the myriad special cases. Instead of memorizing equations, students concentrate on the broad effects of leverage: increasing leverage increases equity risk, but may increase the market value of the firm. Using colors helps the visual learners among us create a mental picture of how risk and market values change.

Creating the market value balance sheet is the first step in visualizing capital structure. Other authors have stressed the importance of this concept (e.g., Titman and Martin, 2016). However, we make the idea more concrete by drawing blocks depicting the balance sheet components, with the relative sizes of these blocks representing their relative values. What makes this explicitly a *market value* balance sheet is the block representing the value of the interest tax shield. When this is present, the value of the firm's total assets is larger than the value of its operating assets, and the frequently used textbook term "cost of assets" becomes ambiguous.

The colors of each block on the market value balance sheet reflect that component's relative risk. As risk rises, the intensity of color increases. (In 1958, MM also used an analogy to describe the allocation of risk,

but today's students are less likely to relate to separating whole milk into butter fat and skim milk than they are to separating pink into white and red.) In our scheme, operating assets are pink. Risk-free debt is white; as debt becomes riskier, the debt block becomes pinker. Levered equity is red. Thus, as assets are financed by debt and equity, pink is made from white and red. (For a less vibrant—but still visual—approach, operating assets can instead be colored grey, with equity becoming blacker as it becomes riskier. Given the restrictions of journal printing, we will use this grey/black scheme in our figures below.)

Finally, we summarize the relationships from the pink balance sheet using one equation:

$$k_{eL} = k_{opA} + (k_{opA} - k_d)*(D/E)*(1-T_c), \qquad (1)$$

expressing the cost of levered equity as a function of the cost of operating assets (k_{opA}), the cost of debt (k_d), the debt/equity ratio, and the corporate tax rate (T_c). This is MM's 1963 "with-tax" relationship. We have two introductory comments about this equation. First, this is not an intuitive expression, so students should be encouraged to learn its simple derivation (which we show below). However, for those students who prefer to have something to memorize, this is the equation to remember. Once they know it, all they have to do is substitute relevant values for the case they are considering (e.g., $T_c = 0$ for MM, 1958); they can also simply substitute betas for costs to measure systematic risk. Second, the "opA" subscript is inelegant, especially since k_{opA} is simply the cost of unlevered equity. However, "opA" reminds students that there can be more than one asset on the market value balance sheet, which the more commonly used "k_{asset}" or "k_{eU}" (for "unlevered equity") notation can obscure.

Having introduced the three basic parts of our approach, we now use the pink balance sheet to describe the basic tax-related capital structure models.

MM 1958: No Taxes; Perpetual, Riskless Debt

MM derive their original irrelevance theorem in a world with no taxes. They also assume that the "physical assets held by each firm will yield to the owners of the firm—its stockholders—a stream of 'profits' over time"—a stream of profits that is unaffected by capital structure. Capital structure choice does not affect the investment opportunity set of the firm, and firm value comes only from the operating assets of the company. In this case, capital structure is irrelevant (MM's proposition I).

Consider a market value balance sheet for a firm in this world. If the firm has no debt, its value is V_U, which the same as its equity value, E_U. This unlevered firm is depicted in panel (a) of Figure 1. The size of the blocks reflects the (equal) value of the operating assets and the unlevered equity, and the pink (grey) color represents their (equal) risk.

Firm value will remain V_U, and the overall risk must remain constant (the same shade of pink or grey), regardless of what we do with the claims on the right-hand side. However, although the whole remains unchanged, adding debt means that the components of the claims side *will* change. As the value of debt rises, the value of levered equity must fall; the more debt we add, the smaller the equity block becomes. It also becomes a darker red, as more of the risk of the operating assets becomes concentrated into the shrinking amount of equity. For example, in Figure 1's panel (b), debt makes up half of the value of the operating assets, so the debt block is the same size as the equity block; in panel (c), in contrast, D/A is 70%, so the equity block is smaller and darker.

A numerical example may help clarify these points. Let us assume that the value of the operating assets— and therefore of the unlevered equity—is 100. In panel (b) of Figure 1, then, we add 50 of debt, reducing our equity value to 50. In panel (c), using 70 of debt means that equity falls to 30. Under MM's irrelevance case, adding a dollar of debt reduces the market value of equity by a dollar.

Figure 1: Capital Structure in a World with No Taxes (MM, 1958)
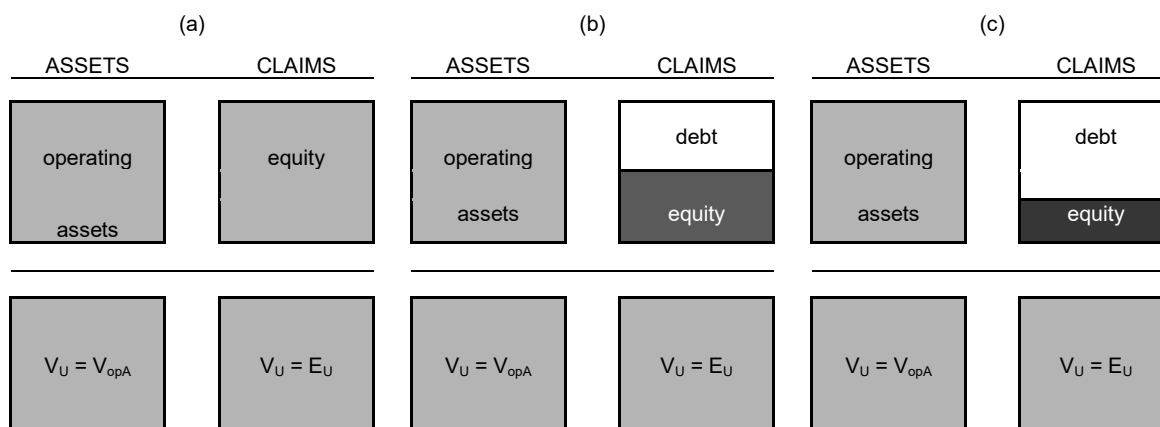
This table illustrates the world of MM (1958). Since there are no taxes, the value of the firm always equals the value of the operating assets; thus, the asset side of each of the three balance sheets includes only the operating asset block. When there is no debt, as in panel (a), the value of the firm's equity equals the value of the entire firm, so the equity block on the claims side of the balance sheet is the same size as the operating asset block; it is also the same color, since the risk of the equity is simply the risk of the operating assets. However, when the firm adds debt, as in panels (b) and (c), the equity block gets smaller (its value falls) and darker (its risk increases). Since MM assume that debt is riskless, we use white to color the debt block. In panel (b), debt makes up 50% of the capital structure, so the equity block is twice as dark as the operating asset block. In panel (c), debt is 70% of the capital structure, so equity is 3.333 times as dark.

As for relative risks, since MM assume that debt is riskless, we have colored the debt blocks in Figure 1 white; all of the risk of the operating assets is concentrated in the equity. In panel (b), where D/A = 50%, the equity block is therefore twice as dark as the operating asset block; in panel (c), where D/A = 70%, the equity block is colored 3.333 times ([0.7+0.3]/0.3) as dark as the operating assets.

We can easily quantify this concentration of risk by noting how k_{eL} (the cost of levered equity) rises as the amount of debt increases. Since the weighted average of the costs of claims must remain equal to k_{opA} (and stay a constant shade of pink), we have:

$$k_{opA} \quad = \quad w_d * k_d + w_{eL} * k_{eL} \quad = \quad (D/V_L) * k_d + (E_L/V_L) * k_{eL},$$

where w_d and w_{eL} are the market value weights of debt and the levered equity, respectively, and V_L is the value of the levered firm (which, given our current assumptions, is the same as the value of the unlevered firm, the operating assets, and the unlevered equity). Substituting $(D + E_L)$ for V_L and rearranging, we have:

$$k_{eL} \quad = \quad k_{opA} + (k_{opA} - k_d) * (D/E_L),$$

which is simply our framework equation (1), assuming that $T_c = 0$. It is more famous, of course, as MM's proposition II. It simply tells us that, if the weighted average of k_d (white) and k_{eL} (red) must always end up as the same shade of pink, then adding more debt means that k_{eL} must get darker red.

As an example, assume that $k_{opA} = k_{eU}$ is 8% and that k_d = 3%. If debt makes up half of the firm's market value, as in Figure 1(b), then the cost of the levered equity will be 13%. If the debt ratio is 70%, as in Figure 1(c), then k_{eL} will rise to 19.67%.

While MM focus on riskless debt, they do comment on the "seemingly paradoxical result" that occurs if k_d is allowed to rise with leverage: "the increased cost of borrowed funds as leverage increases will tend to be offset by a corresponding reduction in the yield of common stock" (p. 274). Students can visualize this result easily with colors. Since the asset side must remain the same shade of pink, if the debt piece gets

pinker (riskier), the equity piece must get lighter red. The equity is getting less risky—as the debt is reflecting some of the (constant) risk of the operating assets—and therefore offers a lower yield.

Two things are happening here: (1) the debt piece is getting larger, making equity riskier; but (2) the debt itself is getting riskier. The "paradox" relates to the latter: *once the amount of debt is determined*, making that debt riskier makes the equity safer. MM note that incorporating the two countervailing effects together makes k_e a nonlinear function of leverage, abrogating proposition II.

Since the MM papers predate the CAPM, MM do not address betas. Nonetheless, textbooks do, and students must. This is easy: simply replace the return (k) values in equation (1) with beta values. Thus, we start with:

$$\beta_{eL} \quad = \quad \beta_{opA} + (\beta_{opA} - \beta_d)*(D/E_L)*(1-T),$$

then replace T_c and β_d with zeros (since, with MM 1958, we have no taxes and debt is riskless), leaving us with:

$$\beta_{eL} \quad = \quad \beta_{opA}*[1 + (D/E_L)].$$

If we want to avoid starting with a memorized equation, we can reach this same conclusion by employing the "portfolio approach." Since the beta of a portfolio is a weighted average of the betas of the portfolio's components, we can simply set the beta of the left-hand side of the market-value balance sheet equal to the beta of the right-hand side:

$$\beta_{opA} \quad = \quad w_d*\beta_d + w_{eL}*\beta_{eL} \qquad \rightarrow \qquad \beta_{eL} \quad = \quad \beta_{opA}*[1 + (D/E_L)].$$

For a numerical example, let's start by assuming that the beta of the operating assets, and the unlevered equity, is 1. Since riskless debt has a beta of 0, this implies that the levered equity in panel (b) of Figure 1 must have a beta of 2, while the even riskier equity in panel (c)—where debt makes up 70% of the market value of the operating assets—is 3.333.

MM 1963: Corporate Taxes; Perpetual, Riskless Debt; Riskless ITS

MM's propositions I and II assume a world of no taxes. MM did extend their analysis to consider taxes in the 1958 paper, recognizing that debt would add value by sheltering some income from taxation. However, in 1963, they corrected that extension by lowering the interest rate that they used to discount the interest tax shield to the interest rate on the debt (k_d), leading them to conclude that "the tax advantages of debt financing are somewhat greater than we originally suggested."

In fact, they found that debt now added the increment T_c*D to the value of the unlevered firm. Debt is still perpetual and riskless: "All bonds… are assumed to yield a constant income per unit of time, and this income is regarded as certain by all traders…" (MM, 1958); "both the tax rate and the level of debt are assumed to be fixed forever…and… the firm is certain to be able to use its interest deduction to reduce taxable income" (MM, 1963). This implies that the annual interest tax shield (ITS) equals the interest payment times the corporate tax rate, $[T_c*D*k_d]$, and that its value can be found by discounting it as a perpetuity. Thus, once MM assume that the cash flows from tax shields "are identical in uncertainty to the debt service payments" (Harris and Pringle, 1985), so that the appropriate discount rate is k_d, V_{ITS} becomes $[T_c*D*k_d]/k_d = T_c*D$.

(Students should note two things at this point. First, this increment to firm value seems to imply that debt adds value without limit. However, MM themselves note that "the existence of a tax advantage for debt financing…does not necessarily mean that corporations should at all times seek to use the maximum possible amount of debt in their capital structures"; p. 442. Explaining why is the mission of the tradeoff theories. Second, students must be reminded that when debt is neither riskless nor perpetual, the value of the ITS will not equal T_c*D, but will be something—perhaps much—lower.)

The balance sheet for this case is shown in panel (b) of Figure 2 (with the no-tax case repeated in panel (a) for comparison). Two things are happening: firm value is rising, and it is becoming less risky.

Figure 2: Capital Structure with Taxes (MM, 1963)
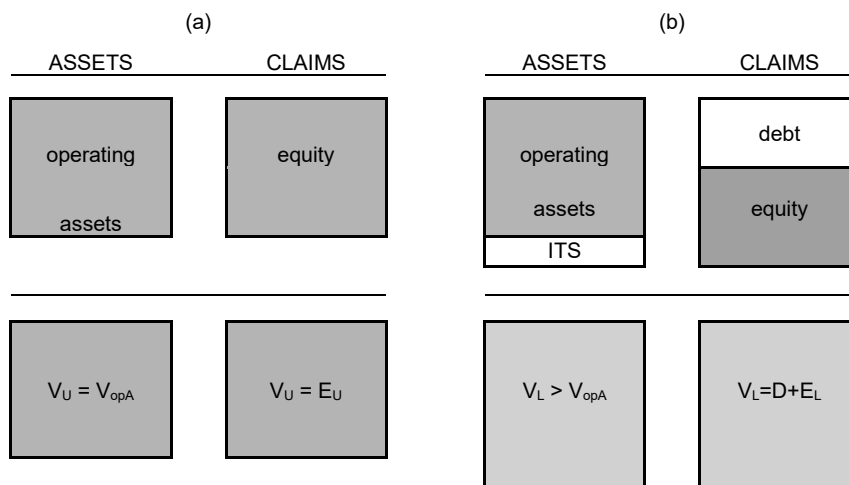
In this figure, panel (b) illustrates MM's (1963) with-tax case. Here, the value of the interest tax shield (ITS) increases the market value of the firm. Thus, the V_L block in panel (b) is larger than the V_U block from the unlevered firm in panel (a). Since MM assume that the ITS is riskless, we have colored the ITS block white. This decreases the risk of the overall firm (whose market value is now composed of both the risky operating assets and the riskless ITS). The V_L block is therefore a lighter color than the V_U block. The levered equity in panel (b) is both larger (more valuable) and darker (riskier) than the unlevered equity from panel (a). More interestingly, it is larger and lighter (less risky) than the equity from Figure 1's panel (b), which had the same amount of debt. In this tax case, the riskless tax shield is added to both the assets and to the equity, so the levered equity here incorporates this new, riskless component, lowering its overall risk relative to the no-tax case. (Note: The shading in this figure is exaggerated to clarify these effects.)

When we incorporate taxes, the interest tax shield adds value to the firm. Thus, we add a new block to the asset side of the market-value balance sheet, and we show a larger block for firm value (since $V_L = [V_{opA} + V_{ITS}] > V_U = V_{opA}$). The value of levered equity is still less than the value of unlevered equity in Figure 2(a), because we must make room for debt (and $D > V_{ITS}$). However, E_L is now larger than it was in the no-tax case of Figure 1(b) (which had the same debt value), since the value of the ITS accrues to the equity.

The color of the ITS block is important. Since MM assume that the cash flows from tax shields have the same risk as the underlying debt, we color the block white, just like the debt block. Now, the risk of the levered firm's total assets is lower (lighter pink) than that of the unlevered firm's, since we have added something riskless (white) to the left-hand side of the balance sheet. Since the ITS accrues to the equity, we are also effectively adding this same white ITS block to the equity. Equity is now comprised of the red rectangle from the no-tax case (from Figure 1(b)) plus a new, smaller white rectangle; this larger value of E_L implies a higher weight of equity overall, lowering the D/E ratio and decreasing the cost of equity relative to the no-ITS case. We now have a larger (more valuable), lighter (less risky) equity block.

Continuing with our numerical example, we have the value of the operating assets remaining at 100, and we use the case from Figure 1(b), where debt equals 50. We will assume that the corporate tax rate is 40%.

Thus, our interest tax shield equals $T_c*D = (.40)*(50) = 20$, and our total asset value is $[V_{opA} + V_{ITS}] = [100 + 20] = 120$. Since $D = 50$, we now have levered equity value of 70, which is higher than the value from the no-tax case in Figure 1(b) by the value of the ITS, 20. The D/E ratio is now $50/70 = 0.71$, lower than the no-tax value of $50/50 = 1$; as we will see below, this will imply a lower cost for the levered equity. If, instead, we set $D = 70$, as in Figure 1(c), we would have $V_{ITS} = 28$, $V_L = 128$, $E_L = 58$, and $D/E = 1.21$ (lower than the $70/30 = 2.333$ from the no-tax case). Adding more debt raised the risk and lowered the value of the equity *within* the tax-shield case, but raised the value and lowered the risk relative to the no-tax case.

MM call these risk effects another apparent "paradox." Adding leverage actually reduces the variability of total returns ("interest plus net profits")! Students can resolve this easily with colors. Again, if the risk of the operating assets remains pink, then adding more white (debt) on the claims side concentrates more red onto the equity ("[t]he variability of stockholder net profits will… be greater in the presence than in the absence of leverage"; p. 435). However, since any uncertainty in the value of the tax shields is "of a different kind and order from that attaching to the stream generated by the assets" (that is, the risk of the ITS is lower than the risk of the operating assets; p. 435), adding V_{ITS}–a white block—to the left-hand side makes total firm value larger and lighter. The red of the equity is now part of a lighter-pink whole. Thus, the risk of the equity increases with leverage "relatively less so than in an otherwise comparable world of no taxes" (p. 435).

Now, let us consider the rate equations for this tax case. Students can easily derive MM's (1963) "correction" equations if they remember the main story:

$$V_L \quad = \quad V_{opA} + V_{ITS} \quad = \quad V_{opA} + T_c*D \tag{2}$$

Using the "portfolio approach," we have:

$$w_{opA}*k_{opA} + w_{ITS}*k_{ITS} \quad = \quad w_d*k_d + w_{eL}*k_{eL}$$

Since $V_{ITS} = T_c*D$, $(V_L - T_c*D) = (E_L + D - T_c*D) = V_{opA}$ (the numerator of w_{opA}), and $k_d = k_{ITS}$, we rearrange to find equation (1):

$$k_{eL} \quad = \quad k_{opA} + (k_{opA} - k_d)*(D/E_L)*(1-T_c).$$

(Again, students should remember that this simplification requires that $V_{ITS} = T_c*D$, which in turn requires a perpetually available tax shield of the same risk as the underlying debt.) To find the beta of our levered equity, we now simply substitute β for k:

$$\beta_{eL} \quad = \quad \beta_{opA} + (\beta_{opA} - \beta_d)*(D/E_L)*(1-T_c),$$

which becomes, when we replace β_d with zero (since the debt is riskless):

$$\beta_{eL} \quad = \quad \beta_{opA} *[1 + (D/E_L)*(1-T_c)], \tag{3}$$

the Hamada equation.

MM do not derive the Hamada equation, of course, but equation (1) is theirs, and students may like their approach to finding it. They start with WACC. Since they assume that the cash flow (CF) to investors is unaffected by leverage, the value of an unlevered firm is CF/k_{opA}, and the value of a levered firm is $CF/WACC$. Substituting into (2), then rearranging, we get:

CF/WACC $\qquad = \qquad [CF/k_{opA}] + T_c*D,$ $\qquad\qquad\qquad\qquad\qquad$ (4)

so that

WACC $\qquad = \qquad k_{opA}*[1 - (D*T_c)/V_L].$ $\qquad\qquad\qquad\qquad\qquad$ (5)

(BMA, 2014 call (5) "r_{MM}," and they do not stress that it is a WACC, not a cost of equity. For any student for whom this is not obvious, the fact that "r_{MM}" is less than k_{opA} can be confusing. In fact, this whole rearrangement, while essentially done by MM themselves, is confusing; unless (5) appears in the textbook, students would be much better off just to remember (4). See Myers, 1974, for a concise discussion.)

Once we've defined WACC this way, we can equate this definition to the textbook WACC equation:

WACC $\qquad = \qquad k_{opA}*[1 - (D*T_c)/V_L]$ $\qquad = \qquad w_d*k_d*(1-T_c) + w_{eL}*k_{eL},$

which, when rearranged to solve for k_{eL}, leads us right back to equation (1).

As always, when students are working with WACC, they need to be careful about the embedded rebalancing assumptions. The textbook WACC equation assumes that debt is rebalanced constantly (or *almost*; see BMA, 2014), keeping the firm's debt ratio constant; in contrast, MM assume that debt is a fixed dollar amount. However, given that MM's cash flows are perpetuities, firm value—and thus the debt ratio—remain constant, as the textbook approach requires.

To put some numbers on this, let us return to our example where $k_{opA} = 8\%$ and $k_d = 3\%$. With a tax rate of 40% and D = 50 (the case from panel (b) of Figure 2), the levered cost of equity is 10.1% and its beta is 1.43. Both of these values are lower than the comparable values for the no-tax case (13% and 2, respectively), demonstrating the risk dilution that comes from adding the market value of the riskless ITS to the levered equity. WACC is 6.67%, lower than k_{opA} for the same reason. When D = 70 (as in Figure 2(c)), $k_{eL} = 11.6\%$ and $\beta_{eL} = 1.72$: higher than the Figure 2(b) case, since risk rises with added leverage, but lower than the no-tax case, because of the tax shield. WACC is now 6.25%, falling as more of the tax-subsidized funding source is employed.

Miles and Ezzell: Corporate Taxes; ITS Risk = Operating Asset Risk

MM's identification of the value of the ITS as T_c*D—which results in the nice "$D*(1-T_c)$" terms in so many textbook capital structure equations—is a consequence of their discounting the tax shield at the cost of debt. However, the ITS may actually be riskier than the underlying debt; it also will fluctuate with operating assets if the debt ratio remains constant. Miles and Ezzell (1980) therefore advocate for discounting the ITS at k_{opA}. Figure 3 shows the balance sheet for this case.

Since we have an interest tax shield, we add the value of the ITS to the asset side, as in Figure 2. However, now that $k_{ITS} = k_{opA}$, we color the ITS block pink. The whole asset side is the same shade of pink as it was for the unlevered firm, but now it is larger. On the claims side, debt can be riskless (as MM assume; shown in panel (b)) or not (panel (c)), but we always have $k_{eL} > k_{opA} = k_{ITS} > k_d$.

To solve for k_{eL} using the portfolio approach, we substitute k_{opA} for k_{ITS}:

$w_{opA}*k_{opA} + w_{ITS}*k_{opA} = w_d*k_d + w_{eL}*k_{eL}$ $\qquad \Rightarrow \qquad k_{eL} = k_{opA} + (k_{opA} - k_d)*(D/E_L),$

or proposition II. Thus, when we assume that the ITS has the risk of the operating assets, we are back in the world of MM, 1958—just with a larger V_L, larger E_L, and a correspondingly lower D/E ratio.

Brealey, Myers, and Allen (2014) use proposition II to find k_{eL} and β_{eL}, since they assume that D/A will stay constant (as the WACC equation requires). Students accustomed to a steady diet of the Hamada equation may wonder how this can be right. Those students must remember the different models' underlying assumptions: Hamada assumes that debt is *fixed*, not fluctuating along with the operating assets. Since the Hamada equation is so integral to capital structure pedagogy, we briefly consider it below.

Figure 3: Capital Structure when Risk of ITS = Risk of Operating Assets
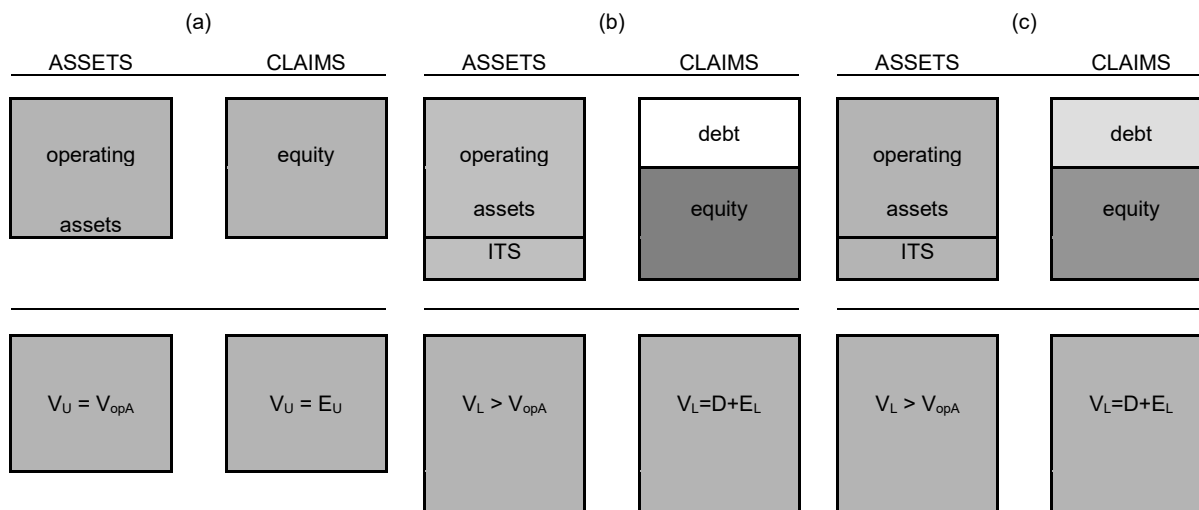
This figure illustrates what happens when we assume that the ITS has the same risk as the operating assets. This would occur if the D/A ratio is maintained, as is assumed in the WACC equation. Now, the asset side of the balance sheet has the same risk after the ITS is added: total assets rise, but their risk does not change. Since the ITS's value accrues to the equity, equity value rises relative to the no-tax case (shown in panel (a) for comparison). Relative to the riskless-ITS case in Figure 2, we are now adding a risky ITS block to the equity, so each dollar of ITS lowers equity risk by less here. (Note that we can no longer assume that $V_{ITS} = T_c*D$, since debt is no longer perpetual and riskless; the size of the ITS block is therefore shown as the same size as that from Figure 2 only for convenience.) If we assume that debt is not riskless, as in panel (c), then equity risk rises by less, relative to the no-tax case.

The Hamada Equation

It might surprise students to learn that the familiar "Hamada equation" does not appear in Hamada's (1972) paper. Instead, he presents a form that is actually easier to remember:

$$\beta_{eL}*E_L \qquad = \qquad \beta_{opA}*E_U \qquad\qquad\qquad\qquad (6)$$

To derive the more familiar relevering form (equation (3)), we must be clear about Hamada's underlying assumptions: he "assume[s] the validity of the MM theory from the outset" (p. 437). Thus, Hamada assumes riskless, perpetual debt. That debt is perpetual is not hard to see, since students will recognize the "T_c*D" term as coming from MM's $[k_d*T_c*D]/k_d$ valuation. However, the "riskless" part, while perhaps not so clear, is critical. Hamada assumes "as an empirical approximation that interest and preferred dividends have negligible covariance with the market"—that is, that their betas are zero (p. 439). In MM's world, there is no doubt about the value of the ITS, so its beta is also zero.

Given these assumptions, we can apply our balance sheet approach (this time starting with betas):

$$w_{opA}*\beta_{opA} + w_{ITS}*\beta_{ITS} \qquad = \qquad w_d*\beta_d + w_{eL}*\beta_{eL}$$

Substituting 0 for β_d and β_{ITS}, and noting that $w_{opA} = V_{opA}/V_L = (V_L - V_{ITS})/V_L = (V_L - T_c*D)/V_L$ and that $w_{eL} = E_L/V_L$, we find equation (3).

Of course, we get the same result if we start with Hamada's own equation, (6). In fact, even though (6) is not in most textbooks, students should be encouraged to start there: it is much easier to remember, and much more intuitively appealing, than (3).

Equation (6) also allows students to consider the relationship between unlevered and levered equity. Since we know that the beta of a levered firm must exceed that of an unlevered firm, equation (6) implies that $E_U > E_L$. Students might be inclined to think that—since a levered firm is more valuable than an unlevered firm—levered equity also must be more valuable than unlevered equity. However, the right-hand side of the levered balance sheet contains both debt and equity. Thus, since $V_L = E_L + D = E_U + T_c*D$, and since $D > T_c*D$, it must be that $E_U > E_L$.

Hamada's paper also highlights a broader point. For many students, it is obvious that operating activities create risk, but harder to see how capital structure does. Nonetheless, risk can come from the right-hand side of the balance sheet as well as from the left, and equity risk can change even if total risk is constant. "The total firm's systematic risk may be stable (as long as the firm stays in the same risk class), whereas the common stock's systematic risk may not be stable merely because of unanticipated capital structure changes" (p. 443)…"adjusting correctly for leverage is not frequently done and can be very critical" (p. 436). Although Hamada was commenting specifically about studies attempting to determine the "fair rate of return" for utilities—about fifty years ago—his point is still integral to the study of capital structure.

APPLICATIONS

We now briefly discuss two papers to which students may practice applying the pink balance sheet approach. The first of these papers is Ehrhardt and Daves (2002), who explicitly incorporate asset growth; the second is Kolari and Velez-Pareja (KVP, 2012), who advocate discounting the interest tax shield at k_{eL}.

Ehrhardt and Daves (2002)

Ehrhardt and Daves (2002) recast standard capital structure theory in the context of a growing firm. They employ the Gordon growth model to define the value of the interest tax shield as $[(k_d*D*T_c)/(k_{ITS} - g)]$, where g is the constant growth rate for operating assets and the ITS. They derive expressions for firm value, WACC, k_{eL}, and β_{eL} for the general case and for three special cases: MM's 1963 model (which uses $g = 0$ and $k_{ITS} = k_d$), adjusted present value (which also discounts the ITS at k_d), and compressed APV (which discounts the ITS at k_{opA}).

Students will be interested in one of their implications. They assert that, if the discount rate applied to the ITS is too low (that is—given their cases—if it is k_d), then the levered cost of equity can fall below the cost of unlevered equity: $k_{eL} < k_{opA} = k_{eU}$. A quick glance at panel (b) in Figure 2 shows that this is not a sensible outcome. Adding the ITS to the asset side increases firm value and lowers overall firm risk (given that the ITS is discounted at a rate lower than k_{opA}, which makes V_{ITS} lighter than V_{opA}). However, on the claims side, we have larger chunk of debt ($D > V_{ITS}$), which is no darker than V_{ITS}. Thus, to keep both sides of the balance sheet the same color, we should see equity get darker (more risky), so that $k_{eL} > k_{opA} = k_{eU}$.

Students should also be able to appreciate some details that the authors do not mention. Since both the operating assets and the ITS grow at the same rate, all of their growth cases are simply radial expansions of the initial balance sheet. Discounting the ITS at k_d gives a larger V_{ITS}, a larger V_L, and a lower weight of debt than does discounting at k_{opA}. However, regardless of the size of the initial balance sheet, once everything starts to expand at the same rate, we are firmly in Miles and Ezzell (1980) mode: the ITS expands right along with the operating assets, so the appropriate discount rate for the ITS is k_{opA}. This is the conclusion that Ehrhardt and Daves eventually reach (although they get there by rejecting their asserted implication that $k_{eL} < k_{opA}$).

Kolari/Velez-Pareja (2012)

The Kolari/Velez-Pareja (KVP, 2012) paper gives us even more opportunities to use the pink balance sheet. These authors assert that MM's models imply that "the after-tax value of equity with no interest deductions becomes *negative* when debt values exceed the unlevered value of the firm" (p. 54; emphasis original). Figure 4 depicts their premise.

Figure 4: The Kolari/Velez-Pareja Premise
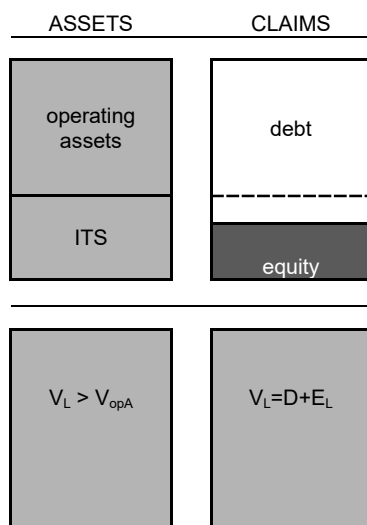
KVP consider a case in which the value of the ITS can exceed the value of the equity. Here, we have assumed that the ITS is as risky as the operating assets, as in Figure 3.

The value of debt exceeds the value of the operating assets (as shown by the dashed line in the debt block), so the equity is worth less than the interest tax shield. Remove that shield (by eliminating interest deductibility), and the equity become negative. KVP seek to remedy this potential problem by discounting the ITS at k_{eL}.

Students can use the pink market-value balance sheet to evaluate KVP's problem, their proposed solution, and its implication for the cost of equity.

First: the problem. Students should recognize that no lender would lend against an "asset" that is created by the deductibility of the interest payments on that same debt. The ITS does not support debt. (If the debt is "old," then the firm is in financial distress, and we should not be using MM-type models.) As the authors note, the ITS belongs to the equity-holders. Thus $V_{EL} > V_{ITS}$, and there is really no problem.

Nonetheless, KVP wish to address the discount rate for interest tax deductions. Dismissing MM's (1963) use of k_d, they consider Miles and Ezzell's (1980) suggestion to use k_{opA}, but assert that this will still lead to a nearly all-debt capital structure. They are missing the point of this approach: the ITS is discounted at k_{opA} because we assume that debt rises as operating assets increase, keeping D/A constant. This imparts the operating assets' variability onto the ITS. Since "the riskiness of each cash flow component determines its appropriate discount rate" (KVP, p. 57), the ITS should be discounted at k_{opA} when D/A is constant—contrary to KVP's contention that "because interest deductions are paid out to shareholders, they should be discounted at the (levered) cost of equity" (KVP, p. 67).

This last contention is the heart of KVP's "revised tax model." They assert that discounting the ITS at k_{eL} leads to a conveniently U-shaped cost of capital curve, implying an optimal capital structure. However, students should understand that the risk of the ITS—while possibly higher than the risk of the associated debt—will not be as high as the risk of levered equity.

Moreover, a quick glance at Figure 4 should convince them that discounting the ITS at k_{eL} will not fix the problem. Making V_{ITS} redder and smaller will not change the fact that $V_{opA} < D$. The problem here is with the assumption that the firm is insolvent, not with the discount rate for the tax shield.

Colors are more immediately helpful when considering the final implication of KVP's revised tax model: "the cost of equity with and without interest deductions is the same" when the ITS is discounted at k_{eL} (KVP, p. 67). Consider Figure 5.

Figure 5: Kolari/Velez-Pareja's Cost of Equity Assertion
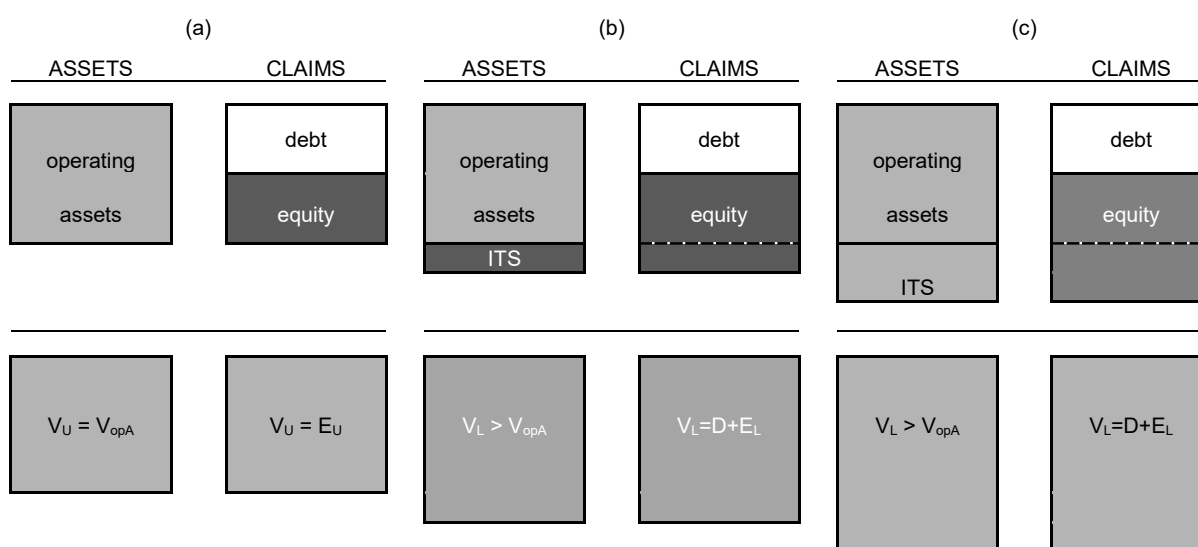
In panel (b), this figure illustrates KVP's contention about equity risk: if the ITS is valued using k_{eL}, then "the cost of equity with and without interest deductions is the same." This contention would require overall firm value to rise. A more plausible scenario is shown in panel (c), which repeats the Miles and Ezzell (1980) balance sheet from Figure 3. (Panel (a) presents the no-tax case, for comparison.)

Panel (a) shows the no-tax case (as in Figure 1(b)), and panel (b) adds the tax shield under KVP's assumption that $k_{ITS} = k_{eL}$. (We assume that $V_{opA} > D$.) The ITS is represented by a small rectangle on the asset side; it is matched by a similar rectangle added to the equity (as highlighted by the dashed line). Clearly, adding the same thing to both sides of the balance sheet means that the system is still in balance; similarly, adding a red rectangle (the ITS) to a red rectangle (the original equity) leaves you with a larger red rectangle—equity value has risen, but its risk stays the same, as KVP contend. However, what they do not consider is that *now the risk of the firm has risen* (note that the V_L rectangles have gotten darker under this scenario). Why should firm risk rise simply because it has taken advantage of a tax benefit? A more reasonable outcome is shown in panel (c), which discounts the ITS at k_{opA} (as in Figure 3). Here, firm value rises with the ITS, but overall risk does not; however, the risk of equity falls relative to the no-ITS base case in panel (a).

CONCLUSIONS

Siegel (2014) reminds us that studying the work of the "creators of classic finance theory in the 1950s and 1960s is "indispensable":

> Classic finance forms a base case or null hypothesis against which empirical facts, new theories, and conjectures can be tested. Without it, we are lost. With it, we have a set of very useful guideposts, a little like Newtonian mechanics in physics—we know it's not exactly right but use it where we can because it is so useful.

MM's capital structure irrelevance theorem is the poster child for this sort of null hypothesis. However, students who study it, and its associated tax-related enhancements, confront too many confusing equations. The pink balance sheet approach allows students to grasp the base case more easily, better preparing them for their study of more sophisticated models of capital structure.

The pink balance sheet frames the discussion of basic capital structure theory into three simple parts:

1-a market value balance sheet: It is critical for students to recognize that the value of any interest tax shield causes both the assets and the equity of a firm to rise, relative to the no-tax/irrelevance case. "Assets" is no longer a sufficient descriptor of the left-hand side of a firm's balance sheet; there are now both operating assets and the value of the ITS. By using blocks to represent the relative sizes of these balance sheet components, students are able to visualize their relative contributions to firm value. This facilitates their recognition that costs, betas, and WACC can be easily generated using straightforward "portfolio" weighted averages, and provides insights into the necessary relationships among these various rates.

2-colors reflecting risks: Coloring the blocks in the market value balance sheet with various shades of red— pink for operating assets, white for riskless debt, and red for equity—furthers students' visualization of the relative risks of the balance sheet components. Visual learners, in particular, will have an intuitive feel for how increasing the size of the light debt block concentrates the risk (red) in the equity. Using different colors for the ITS block—white in the MM (1963) case and pink for Miles/Ezzell (1980), for example— clarifies the effect of adding the ITS on the risk of both the equity and total assets.

3-one equation: The traditional textbook approach to surveying capital structure literature involves far too many equations. The pink balance sheet approach uses one framework equation, from MM (1963), that students can use for both costs and for beta levering. All they need to do is apply the assumptions of their particular case: Are there taxes? Is debt riskless? By using the (admittedly inelegant) "opA" notation, this equation also reinforces the components of the market value balance sheet: when there is an interest tax shield, then there are *two* types of assets, and the risk and size of "total assets" may be different from that of the operating assets.

My assertions about the efficacy of the pink balance sheet approach are based on my experience teaching corporate finance to both graduate and undergraduate students for over twenty years. While I have not performed a formal assessment of the method, I have seen many students have "a-ha!" moments when we use colors—a reaction I never witnessed when simply presenting the standard textbook material. Of course, not all students are visual learners, and the approach should work better for those who are. But we cannot expect one approach to be ideal for every student (and every little bit helps).

This paper only covers the material presented in a standard corporate finance textbook, such as those surveyed in the literature review section. Thus, we focus on the value created from the deductibility of debt interest. We do not incorporate more advanced potential influences on a firm's choice of capital structure, such as the existence of takeover regulations or payout restrictions; management's desire for financial slack;

national culture; firm size; the use of convertible debt; the types of products a firm sells or the cost structure it employs; or the opportunity for a firm to organize as a pass-through entity (e.g., an S corp.) (see, for example, Titman and Wessels, 1988; Chui, Lloyd, and Kwok, 2002; Graham and Harvey, 2002). Adjustments to the pink balance sheet approach that allow for incorporation of these complications could be an interesting avenue for future research.

After surveying hundreds of CFOs about the actual use of various academic capital budgeting and capital structure approaches, Graham and Harvey (2002) found that the executives were much less likely to adhere to academic "factors and theories when determining capital structure." The authors mused that this could be because "business schools might be better at teaching capital budgeting than at teaching capital structure (and therefore firms do not follow academic guidance about capital structure as closely" (p. 28). This conclusion is not surprising, given the jumble of equations that make up the majority of mainstream textbook explanations of capital structure theory. The pink balance sheet approach is meant to present the most important elements of that theory in an intuitive, visually compelling way. I hope that it makes capital structure a more understandable topic for future students.

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ACKNOWLEDGMENTS

BIOGRAPHY

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AN EXAMINATION OF POTENTIAL FOR A DOCTORATE IN ECONOMICS AND BUSINESS IN PUEBLA, MEXICO

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ABSTRACT

This paper examines if a market exists for a doctorate degree in business and economic in the center-south region of Mexico. This study is part of a strategic planning project. A survey was conducted to determine supply and demand for such a degree. The objective is to identify the market for development and implementation of a postgraduate program that can fulfill market requirements, students' interests, and be suitable for the poorest regions of Mexico.

JEL: I21, R13, M53

KEYWORDS: Strategic Planning, Regional Development, Competitiveness Education

INTRODUCTION

In this paper, we examine if a market exists for a doctorate degree in business and economics in the center-south region of Mexico. This region is one of the poorest in Mexico. The study is part of a strategic planning project for the implementation of a postgraduate course that meets market requirements.   Allocation of resources to implement a quality graduate program depends on its ability to meet social, cultural and academic needs and its ability to contribute to the economic and sustainable development of the region where it is offered. It must also align with the objectives of the National Development Plan (PND), as well as the institutional development Plan (PID) of the Benemérita Universidad Autónoma de Puebla (BUAP). Finally, the analysis relies on strategic planning to create a work plan to identify a market that could have a doctorate program in economics and business administration. The remainder of the paper is organized as follows. The next section provides a literature review. The following section provides a discussion of the methodology used in this study. Next, we present the result of the study.   The paper closes with some concluding comments and suggestions for further research.

LITERATURE REVIEW

<u>Strategic Planning</u>

Strategic forecasting embodies the notion of the organizations future and destiny. How will the organization deal with challenges and opportunities? How will it make long-term decisions to achieve the planned goals and what actions are needed for goal achievement? Henry Fayol's (1916), classic theory of Administration, argued planning is critical.   Fayol (1916) considered forecast/planning as a first element of the

administrative process. Currently, planning is the foundation for development and consolidation of any organization. Planning develops into strategic planning, which some authors, such as Chiavenato (2011), argue is "..the deliberate and systematic decisions making process that will affect or should affect the entire company in the long-term. Strategic planning involves longer deadlines, it is broader, and it is developed at the highest hierarchical levels of the company or institutional level. It is a continuous process of strategic decision-making that does concern with future decision, but rather with the impact that today's decisions will have in the organization's future." (Chiavenato, 2011).Hernández (2014) viewed strategic planning as synonymous with strategic direction, strategic management and Global management. He argued planning is a process. It is a series of stages that are integrated by concepts such as: diagnosis (description of external and internal environment), vision-mission, objectives, strategies, budget, evaluation of results and feedback (Hernández, 2014). Porter (1992) contended that companies must carry out strategic actions to achieve competitive advantages. This can be done by gaining competencies such as cost leadership (being more efficient than their competitors) or through differentiation (making and maintain products and services in a different way. "A company can overcome its rivals only if it can make a difference that it can keep (Porter, 1992)." Only then, will they be able to overcome the competitive challenges of the market and the technological revolution of today. The fundamental of the core competencies is that they are promoted and developed at the corporate level and define the basis of the competitive strategy for the whole firm" (Hax, 2004).

Competitiveness

According to the Mexican Institute for Competitiveness (IMCO), based on World Economic Forum (WEF), Global Competitiveness Index 2017 (IGG), Mexico holds the same level of competitiveness as 2016, where Mexico was located in position 51 of 137 countries. This ranking was based on macroeconomic indicators and a survey of entrepreneurs and executives on issues such as corruption and innovation or perceptions of the labor market. For the first time in 10 years, there were signs of economic recovery at the global level. Switzerland ranked first in worldwide competitiveness, followed by the United States and Singapore. At the regional level, Europe was the world leader with six countries (Switzerland, Holland, Germany, Sweden, the United Kingdom and Finland). In Latin America, Mexico was the fourth-best-rated country after Chile, Costa Rica, and Panama. Mexico was 131st in costs for entrepreneurs due to insecurity (safety issues), 127th in confidence in the political process, and 118th in government efficiency in resolving labor disputes. However, corruption continues to be a major obstacle for doing business in Mexico (IMCO, 2017).

The Institute for Management Development (IMD) reported that despite the reforms approved in 2013 and 2014, Mexico suffered a setback. Competitiveness due to Government efficiency and Development of infrastructure and education were instrumental in the country setback. Support for education continues to be a concern and expected budget cuts could affect education. From 38 countries assessed, Mexico showed the lowest educational performance, which opened huge gaps with the other OECD members. The OECD index for a better life places Mexico at the lowest level of well-being after South Africa. If Educational reform and other reforms are not implemented, Mexico will not be able to leave the "trap" of low competitiveness. It will not offer a better quality of life to its citizens, noted Arturo Briz, Director of the Competitiveness Centre IMD World (the financier, 2016). Success of business management can be measured by the stakeholders ' point of view (customers, shareholders, suppliers, employees, society, Government, etc.), as well as the generation of economic returns and long-term business endurance. These elements are integrative entrepreneurial goals that impact businesses (Hax, 2004).

Local Offering of Doctorate Degrees in Economics and Business Administration

At the national level, the National Council of Science and Technology reports two doctorate options in business administration, with National Register of Quality Postgraduate Studies recognition. The two doctorate programs are located in the north of the State of Puebla and in the central area of the country. The

closest to a metro area is located at Universidad de San Nicolás de Hidalgo. Their doctorate program website reports only nine students enrolled in their business administration doctorate program, five male and four female students (UNH, 2016).   Universidad Autonoma de Coahuila also offers a doctorate degree in business administration and management. This program is recognized and included in the National Register of Quality Postgraduate of CONACYT (UA of C, 2016). The institution reports that it has fourteen students enrolled with scholarships in this doctorate program (CONACYT, 2016). The State of Puebla, has doctorate degree granting institutions, but they are not in business administration, economics, or management. However, some of the doctorates could be substituted for doctorate degrees in economics and business administration. In Puebla, doctorate granting programs are offered by different institutions. Table 1 presents a list of the most important programs recognized by the National Council of Science and Technology (CONACYT), through the National Program of Quality Postgraduate (PNPC), (CONACYT, 2016).

Table 1: List of Doctorate Programs Offered in Puebla by Institutions Recognized by CONACYT

Program	Institution Offering the Degree	PNPC Recognition	Number of Students
Doctorate in development political economics	BUAP	Yes	24 (CONACYT, 2016)
Doctorate in strategic planning and technology management	UPAEP	Yes	112 (CONACYT, 2016)
Doctorate in public administration	IAP -PUEBLA	No	No available (IPA, 2016)
Doctorate in international business and management	UPAEP	No	Not available (UPAEP, 2016)
Doctorate in economics and sector strategic development	UPAEP	No, I had until 2013	Not available (UPAEP, 2016)
Doctorate in organizational management	UPAEP	No	Not available (UPAEP, 2016)
Doctorate in management and finance	UPAEP	No	Not available (UPAEP, 2016)
Doctorate in management and marketing	UPAEP	No	Not available (UPAEP, 2016)
Doctorate in business administration	IBERO PUEBLA	No	Not available (Ibero Puebla, 2016)
Doctorate management	UVP	No	Not available (UVP, 2016)
Doctorate in finance	UDLAP	No	Not available (UDLAP)
Doctorate in organizational studies	UAM	Yes	Not available (UAM, 2017)
Comprehensive postgraduate course administration	UAM	No	Not available (UAM, 2017)

Table 1 shows a list of doctorate-granting institution in the State of Puebla. Data was collected from each institution's official website. Data included type, doctorate degree concentration, granting institution, if the program is recognized by the PNPC and number of students enrolled.

DATE AND METHODOLOGY

To estimate the demand of a doctorate degree in economics and business administration, a survey was conducted, to graduates, as well as to students of the last period of the mastery that imparts the FCP of the BUAP, in a non-experimental survey, in the same faculty. This research project is divided in two parts. Part one analyzes the results of a survey applied to a sample of 30 students. Part two analyzes the same survey apply to 325 students. This paper presents the result of part one. Using a non-probabilistic sampling technique, a sample of 325 students were selected from the Master of Business Administration (MBA) program at Benemérita Universidad Autónoma de Puebla (BUAP) for the study. From this sample, a group of 30 students were selected to run a pilot test to verify questionnaire reliability. A questionnaire was applied to the students to estimate future demand for a doctorate in Economics and Business Administration.

Population and Sample

We consider the total enrollment in the Master program at Benemérita Universidad Autónoma de Puebla (BUAP). The sample size was estimated using equation 1.

$$n = \frac{(z \, x \, s)2}{E}$$
(1)

Where:
E = Margen of Error
Z = confidence interval
s = Deviation of the sample (from the pilot sample).
Normal distribution: Z = 1.96

Using equation 1, a sample size of 325 students was calculated. We consider master's students close to graduation and student already graduated. For the first analysis, many students were unwilling to participate. We were unable to track many of the graduated students. Therefore, part one of this study is conducted with approximately 10 percent of the estimated survey sample (30 students). The questionnaire was administered to three groups at the Faculty of Public Accountancy. Two groups were from the Master of Business Administration program and one from the Master in Taxation program. All groups were senior level or already graduated. We excluded all freshman, sophomore and junior students. The surveys were taken between November 18 and 23, 2017, in the classrooms and the postgraduate building. The students completed the survey anonymously. A note regarding licenciatura degree. In many countries a licenciatura degree is an intermediate degree between a bachelor's degree and a master's degree. In other countries a licenciatura degree is considered an undergraduate degree. In still other countries it is considered a postgraduate degree. Therefore, we will use the term licenciatura with no translation to English as it applies to the Mexico Educational system.

RESULTS AND DISCUSSION

The results show that 60% of the students who were about to finish the master's degree were women. Thus, females represent a large portion of the responders. Respondents were master's students close to graduating or already graduated. When analyzing age, the dataset presented wide spread data with a few outliers. The minimum age was 26 years of age and the maximum 55 years of age. The average age was 34.6 years. We infer that future doctorate students will be younger than current generations (see Figure 1).

Figure 1: Average Age of Students Who Are Close to Graduating from a Master's Degree
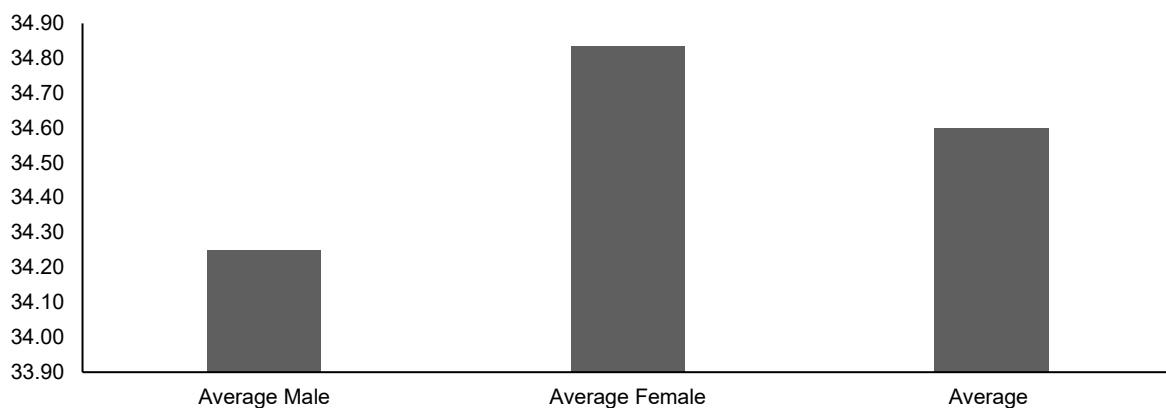
Figure 1 presents the average age for our sample data. The sample was comprised of master's students who were close to graduation. The average age was 34.6 years, with 26 years as the youngest and the oldest 55 years.

Master's students at the Faculty of Public Accountancy work while going to school. It is important, because in Mexico, rural youth have less expectation than those of the urban environment, and it is especially evident around graduate studies (De Garay y Miller, 2014). The 90 percent of the students worked and only 10%

of them do not work. In most instances, the costs of pursuing a master's degree (tuition, and related materials) was covered by the students themselves, so it is not surprising that 90 percent of master's students have to work. This result was consistent with the Faculty of Public Accountancy student profile. Of those students who worked, we analyzed the type employer they work for. We found that 60 percent of the students worked for companies and educational institutions, follow by government and offices. Figure 2 shows the results.

Figure 2: Place Where Master's Students Work
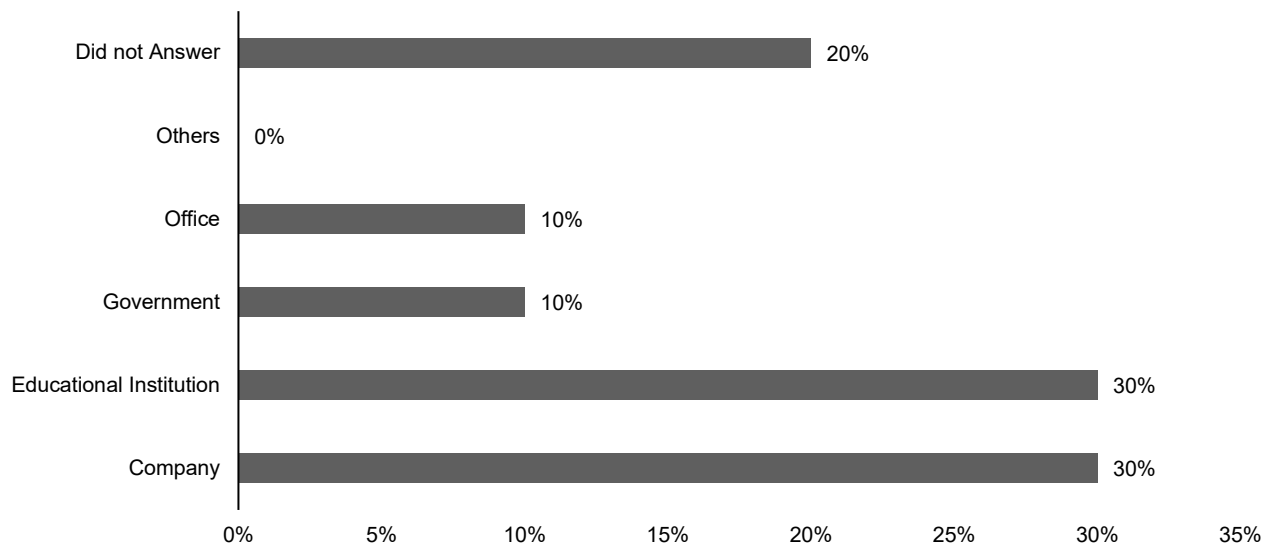
Figure 2, shows that most master's students worked in companies and in educational institutions and a minority worked in government and offices.

We analyzed the educational background of licenciatura students taking the Master's degree. Results show that 80 percent of the students had an administration economics degree prior to starting their master's degree (See Figure 3).

Figure 3: Licenciatura Student's Educational Background Prior to Starting a Licenciatura Degree Program
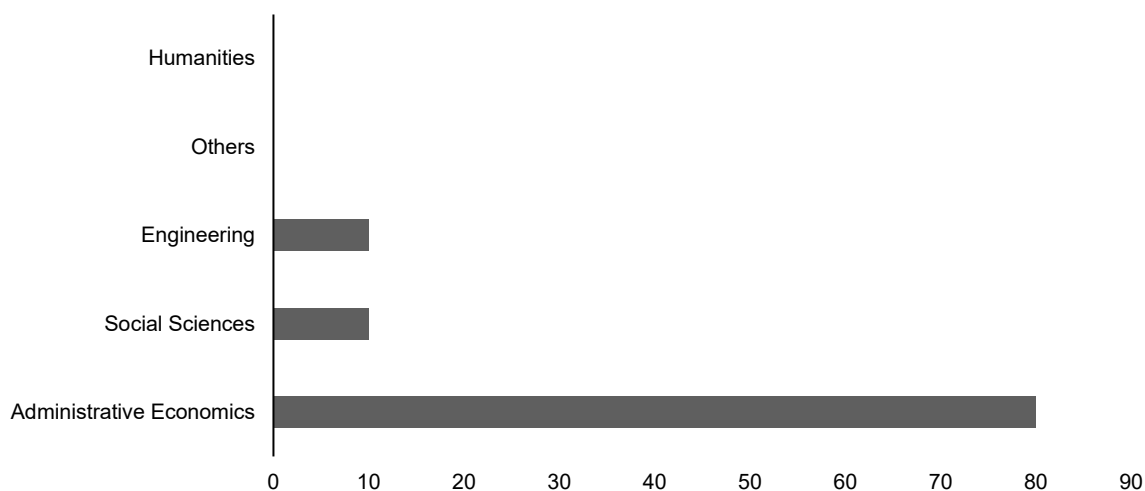
Figure 3 shows that the majority of students pursuing a licenciatura's degree had a profile of administrative economics.

Because, our sample was selected from the Faculty of Public Accountancy at Benemérita Universidad Autónoma de Puebla, 100% of the responses showed an administration and economics as their future educational background. The 100% of students expect to be graduated from master's degree in administrative economics. Because, our sample was selected from the Faculty of Public Accountancy at Benemérita Universidad Autónoma de Puebla, 100% of the responses stated as a traditional classroom style Master's program. For future research, we, then, elected to aggregate online and videoconference to a new distance education degree type. For now, the 100% of master's students do so in person in a traditional classroom style. When we analyzed the program type, we noticed that high percentage of the students did not identify a program profile. Therefore, the results differ even though they are administrative economics master's program at Faculty of Public Accountancy at Benemérita Universidad Autónoma de Puebla. In this regard, it is important to work with students so that they have a better understanding of their academic profile upon graduation. Figure 8 shows the results.

Figure 4: Program Academic Profile
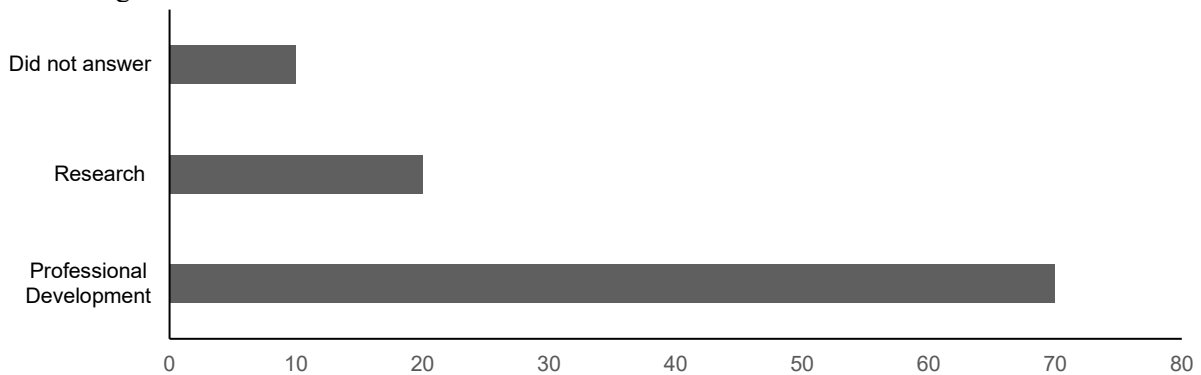
Figure 4 shows that 70% of the students considered the type of program to be professional while 20% perceived the program as research oriented.

To gather more descriptive data, we added questions that indirectly allows us to gather data relevant to the study. We added "Have you ever written a research paper and/or research Report?" This question was used during the full survey period. To offer a doctorate program that appeals to a large base of master's students or master's graduates, we need to determine their primary interest in pursuing a doctorate degree. Our survey shows that potential PhD students were interested primarily in professional growth and were interest in research. It is understandable because most of them work and aspire to a better position within the organization for which they work and/or better employment opportunities. Results show 50 percent of the students were interest in research, and in seeking alternatives to solve problems. The 50 percent of students were interested in their professional growth. We included questions assessing funding. Specifically, we wanted to determine the importance of having access to scholarships. Some 80 percent of the students identified receiving an CONACYT scholarship as essential to pursuing a doctorate degree. Therefore, for any future economics and business education doctorate granting institution, it is critical to secure funding from CONACYT for scholarships. The that 80% of students were interested in studying a doctorate program with CONACYT scholarship and only 20% were not interested.

Then, we wanted to evaluate student's willingness to embark in a full-time doctorate program with CONACYT scholarships. The results to the question: Are you willing to be a full-time doctorate student? The results demonstrate, that with a scholarship, 70 percent of students are willing to become full-time students. Master's Students Willingness to Become Full-Time Doctorate Students with CONACYT Scholarship the 70% of students were willing to be a full-time PhD student The fact that students were willing to devote to a full-time program was encouraging. However, it is important to note that a few students expressed a desire to seek a doctorate degree with no scholarship from CONACYT as long as they could continue to work. Thus, there are future opportunities from such student types for a doctorate

program. The next question analyzes what students want to develop during a doctorate program. Results show 50 percent of students were interest in developing projects with a social impact, follow by generating economic development opportunities at the local level and greater professional development opportunities. However, they did not consider new, better-paid job opportunities or higher incomes a result of a doctorate degree. By contrast, the search for a program that allows for professional growth. Perhaps, they don't equate professional growth with better-paid jobs. Figure 5 shows the perceived impact of the doctorate program. For the majority of the students, this impact was that they could generate research projects with social impact. Others believe that they would have greater opportunities for job growth, as well as to generate more opportunities for economic development at the local level.

Figure 5: Perceived Impact of Doctorate Program on Students
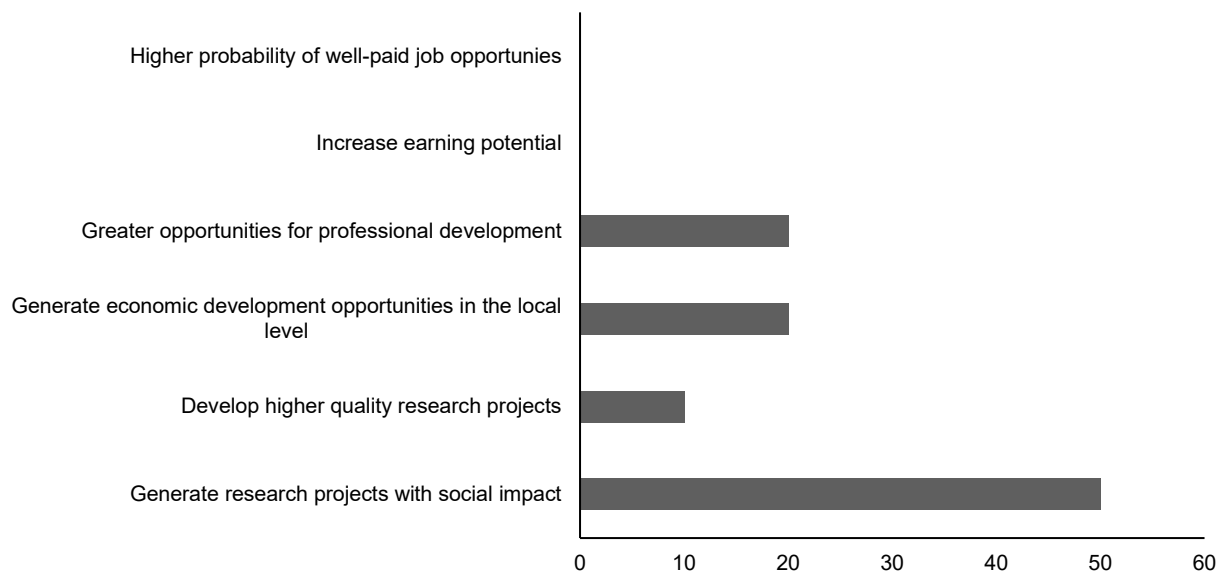
Figure 5 shows that 50% of students believed the impact of the doctorate program would be to generate research projects with social impact, 20% thought that they would have greater opportunity for job growth, as well as greater opportunities to generate economic development at the local level.

To determine the impact of a doctorate program in a place such the central part of the country, students were asked where they were from. One would hope that students from central part of the country or rural area will have a motivation to use a doctorate degree to develop and implement projects with economics and social impact in these areas. Only 20% of the respondents were from provinces or rural areas. It is important to note that 30 percent of respondents have relatives in the province. Therefore, a relative small percentage have strong interest in rural areas or provinces. However, 70% of respondents were willing to develop projects in rural and province areas with an economics and social impact. Finally, from the survey, we extracted students additional comments, among which we found that students want (1) trained professors who research and teach in their area of expertise; (2) be able to apply what they have learned to real-life issues, (3) greater academic support to guide quality products and projects, (4) continuous information and continuous work, (5) doctorate student work experience, so that they can contribute to program, (6) to start a doctorate degree in economics or taxation if they can get scholarships, (7) a doctorate program with no CONACYT scholarship that is not full-time thereby allowing them to continue working.

CONCLUDING COMMENTS

This paper identifies the market, for a competitive postgraduate program. A survey instrument was applied to potential users of doctoral services in administrative sciences in the area.   We provide an in-depth

analysis of market needs. We find that focus areas of knowledge and the strengths of the doctorate program are necessary to meet the needs of society. In addition, students need an education based on values. Postgraduate education can help them develop, as much as possible, the economy of regions that suffer from disconnection between what educational programs offer and society needs. Many graduate students do not return to their community. Thus, the goal is to develop a doctorate program with students from southern Mexico regions, who may have the desire and family roots to return to their communities. One hopes that they return to generate projects that bring economic development and growth to their communities and to create projects that take advantage of the enormous cultural and natural riches. By doing so, they can assist communities in moving away from poverty.

In addition, it is necessary to bring research projects closer to reality, to meet the needs of communities and convince the region to participate in the projects. The research projects need support from governments and organizations willing to assist in economic and regional development. Many current programs are focused on forming research specialists only. Others concentrate only on a very specific area of business. As a result, the number of doctorate graduates increases with no visible regional development results. It is important to clearly define lines of research and to focus on research projects that deal with real needs.

Research should generate greater economic development, particularly in the southern region of the country, where marginalization, unemployment and poverty are higher. As the results demonstrate, students want to work on projects that have a direct economic and social impact. Institutions should consider the students' desire to help communities. The goal is to encourage graduates to reconnect with their communities, to train leaders who can work within community and to use the resources available to generate wealth.

Finally, with advances in technology and communication, institutions may consider a mixed or hybrid program that includes distance and classroom style education for a doctoral program. However, they must be carefully developed to assure consistency within the programs and to avoid discrepancies that often occur in distance education. The results obtained identify the local market for postgraduate courses in administration. Future research might focus on international competition in the market.

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MARKETING EFFECTIVENESS OF EDUCATIONAL SERVICES ON WEBSITES

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ABSTRACT

Marketing educational programs in a complex world inspired the investigation of relationships between education marketing and digital media. The research questions were: Which organizations are promoting educational programs? What are the components of the programs/products? The research considered how they differentiate themselves, including their implied value proposition and interaction on digital channels. The study was to better understand what educational programs are offering, which services provide these benefits as outcomes, classify how they are promoting themselves, and evaluate/explain how that message is being communicated. The top 20 organizations who fit this web search were selected and their digital marketing was analyzed using personal computers. Researchers compared .ORG, .GOV, .EDU, and .COM types of educational organizations. The research examined how schools promote and deliver services to their members, parents and students. Using data of: 1) live on-demand chat 2) scheduled chat 3) social media 4) blog 5) interactive and 6) searchable website. The highest scoring website was WeAreTeachers.com, considering usability, efficiency, accessibility, learnability and satisfaction. Success was determined when the content on the websites was accessible and visitors could find what they were seeking.

JEL: M30, M31

KEYWORDS: Information Seeking, Website Perceptions, Content, Promotion, Consumer Behavior

INTRODUCTION

Organizations providing education-related services to schools across the country are challenged to use the Internet more effectively to both promote and deliver their services. Whether state boards of education, various associations of educators, not-for-profit organizations or for-profit companies, the realities of effective use of the Internet is vital to their reaching their intended education markets. As with all marketers, these organizations must address what is commonly known as the Marketing Mix: Product, Place, Promotion, and Price. The digital environment requires fresh ideas about each of these 4 Ps. The traditional ways of interacting with customers often do not translate to this new environment. Marketers must adapt to these changes or find they have much less access to their primary markets. The products (including services) provided by education-related services to schools and educators can look quite different from what was traditionally produced on paper in analog form. While the essence of the product often remains the same, how it is packaged must be quite different. It is critical that these providers carefully examine what they offer. Is their product line simply what they have offered in the past or is it adapted to the evolving needs of their customers? How have they modified the product mix offered? How well aligned is their product offering with the digital environment? Place is the delivery of product to customers. In this environment, the distribution primarily happens digitally but some organizations retain an in-person component. Two important issues in this arena are ease of use and quality of the visual presentation. Many marketers simply present the same information in the same way on both the virtual and in-person environments.

The essence of promotion is how an organization presents what it has to offer. Generally, promotion is expected to: 1) provide information to customers, 2) increase demand, 3) differentiate the product, 4) enhance the product's value, and 5) stabilize sales. Marketers of educational services, especially in this digital age, are faced with new challenges to accomplish these tasks. Further complicating this challenge is the need to sufficiently understand the organizations' customers to tailor the language used in communications.   Customers want and need to know the cost of what is being offered to them. This value equation is an interplay between the customers' desire for the product and the marketer's pricing strategy. The pricing is impacted by whether the organization has a mandate to distribute information, to include information as a service included for members, or plan to sell information for profit. All three types of organizations are operating in the educational services marketplace.

This research is intended to explore how a variety of organizations address these marketing challenges. This task leads to the following research questions that guided this study: 1. What services and information are offered?, 2. How is the organization and its services presented on its website?, and 3. What is the organization's implied value proposition to potential users/customers? Marketing educational programs in a complicated world led the research team to investigate which companies are promoting educational programs and how are they promoting them. These educational programs were challenged to solve problems arising from the following issues: 1. Establish a positive school culture, 2. Increase academic performance, 3. Improve safety, 4. Decrease problem behavior, and 5. Create physically active classrooms/education. The goal of the research was to better understand which educational programs are offering services that provide these benefits as outcomes, classify how they are promoting themselves, and then evaluate/explain how that message is being communicated.

LITERATURE REVIEW

In today's learning environments, students and parents are searching for outcomes. They have access to digital devices such as desktop personal computer and laptops. They also use tablets and mobile phones. The internet is a home for knowledge. Muir (2014) looked at an organization that is innovating education, the Kahn Academy, and how students accessed online educational websites. Their perceptions of how useful they were varied. The traditional role of the teacher was being challenged, as evidenced by 57,000,000 searches for "help with mathematics" on Google (Muir, 2014). What outcomes are those who are searching on personal computers for educational programs looking for? The study on these outcomes was based on three previous research studies: 1) (DePorter & Hernacki, 1992) with Quantum Learning and Supercamp, focused on outcomes of K-12 education. 2) DePorter, Reardon, & Singer-Nourie (1999) 8 Keys to Success, and, 3) Given, and DePorter (2015), transformation due to human imitation of positive interactions, and goal setting behaviors that lead to achievement in K-12 schools.

Search Engines

Using search engines is one of the ways to discover what we are looking for in a digital environment, similar to how we used a card catalog at the library in the past, only now we have access to every card and cross referenced in trillions of results. The major search engines currently are Google, YouTube, Bing, and Yahoo, with Google's engine having more than a 72% share of the searching behaviors. Few would argue that this is the dominant search platform, especially as their parent company, Alphabet, also owns YouTube, the second largest search engine. The role of a search engine is to provide relevant search results quickly (Visser & Weideman, 2014). Search engines use algorithms that are designed to scale well with very large datasets. They are optimized for fast and efficient access. A search engine helps to organize results by using an algorithm to serve the results that are accurate. The web is a vast collection of completely uncontrolled heterogeneous documents, indexed by data such as hyperlinks and formatting (Brin & Page, 1998). How usable the website is depends on the visitor's ability to connect with the information. Removing obstacles that could hurt their experiences will allow for higher levels of

satisfaction by users. Once a website loses the visitor because of usability, they are unlikely to visit again (Visser & Weideman, 2014). Evidence that the classification models of searching was documented. This was based on restaurants and getting info about the details users needed, by going to content websites for the information search. Hsu & Walter (2015) looked at how consumers in need search for information on the internet. There were four conclusions on how consumers search the Internet. (Hsu & Walter, 2015): 1) Certain users create Internet searches using the dominant search engines, such as Google, 2) Some people go directly to a content website, 3) Others have their "go to" search engines, and 4) Those who search vary in how extensively they search.

<u>Marketing on the Internet</u>

Internet access services, such as websites, are the dominant communications tool for internet exchange and sharing (Jarret, 2015). The Federal Communications Commission (FCC) has regulated the telecommunications industry since 1934 and starting with dial up services, regulates the Internet, as part of the public good. In 1996, Congress drew up two categories, telecom services and information services. Information services, such as Facebook and YouTube, are mostly exempt from FCC regulations. The FCC created the Open Internet Order in 2015 with strong rules about net neutrality. This law requires that carriers cannot block, throttle or prioritize for pay, i.e., no fast lanes on the Internet (Jarret, 2015). Given that all websites have equal access on the World Wide Web, how do websites get seen? The outcomes of digital marketing can be the following: increasing awareness, brand image, esteem, sales, loyalty or commitment (Flores, 2013). Good websites should be easy to use, useful and easy to understand and navigate (Aziz & Kamaludin, 2014). Pynoo & Tondeur, et al (2012) looked at secondary school teachers and how they accessed educational websites, based on usage data and online questionnaires. They tried to predict which websites would be most used and therefore useful. They also considered consumer behavior and found that searching for and downloading material was the number one use, not sharing content. The predictors for this behavior were individual's attitude and perceived usefulness of the material downloaded. Digital online relationships differ from analog offline or in-person relationships and theories emerge about the source of these differences, including anonymity. (Kozlenkova, Palmatier, et al, 2017) For a marketer there is a double edge sword; an anonymous relationship can promote both risky trial and easy termination. Two-way promotional communication in online relationships, rather than unilateral relationships help consumers differentiate, make choices and reduce risk, therefore increases sales revenues and shortens the decision-making time period and have a positive financial impact on purchasing and revenues (Kozlenkova, Palmatier, et al, 2017).

How do we promote and get the attention of our audience online? Using graphics is one way to get attention, as well as using photographs. Ozmen (2015) looked at analyzing users attitudes about online content, including how information is retrieved and processed. They considered how online ads should be presented for more effective responses. Digital users were attracted by keywords and the initial digital presentation. Users gave more importance to specific details over general information, indicating that being explicitly clear in content may lead to even greater value to users. Consumer attitudes toward information retrieval and processing made a difference. Relating to our study of educational marketing programs, in the Business to Business (B2B) space, web pages and value-add content helped a business stand out among competitors. Holliman & Rowley (2014) reviewed digital marketing practices and suggested insights on what would improve content relevance, especially since the marketing industry is facing a decline in effectiveness in what they termed, interruptive marketing techniques. The following terms were used: useful, relevant, compelling and timely. The cultural change to "helping" is better than "selling" in these cases examined. Content marketing requires different marketing objectives, tactics, metrics and skills than those with traditional marketing approaches. Digital Marketing on personal computers has replaced some traditional interruptive marketing tactics such as direct mail, door to door and telemarketing, which have been declining in effectiveness based on price/value. Interactive marketing

is useful and valued for achieving and sustaining a trust in the brand (Holliman & Rowley, 2014). Consideration needs to be given to the relevance, usefulness, timeliness and degree of interest.

Stanaland (2010) looks at design of web pages and consumer behavior of how different segments of people access them. If a company knows in advance the type of consumer who will be searching or seeking, that can help them to design a more appropriate website. For educational program marketers, they may have a need to reach the seekers, who want a controlled environment and simple design rather than the surfers who value the interactivity. These marketers may choose a tactic that presents websites more simply and give users more control when they visit. Controlling distribution via the Internet has been an issue for the hotel industry (Carroll & Siguaw, 2003). Internet based room reservations presented challenges for scaling their selling of perishable rooms, and lead to the success of startups like Airbnb and other travel booking websites.

The effect of Internet distribution has had an effect on brick-and-mortar sales (Pozzi, 2013) and the music distribution (Sparrow, 2006). Revenues increase overall, in this supermarket study, and even more when the chain stores face more competitors. For the consumer, purchase behavior tends to differ across the online and offline channels, based on tangibility, (Degeratu, Rangaswamy, and Jianan, 2000) product weight (Chintagunta, Chu and Cebollada, 2012), pricing (Chu et al., 2010), and assortment (Zhang et al, 2010). Metrics are more important than ever when it comes to digital marketing. Key Performance Indicators (KPI's) to measure effectiveness and Return on Investment (ROI). Globally speaking, what is too expensive or too hard to measure will be eliminated from the tactics (Flores, 2013).

DATA AND METHODOLOGY

This research study began in 2012 with a Meta study on Quantum Learning and how they were effective in the advancement of educational programs. From April 2016 through November 2016, data was gathered. Building on that research, the key words were the outcomes of these programs, as that would be what users of educational programs would be seeking in their search processes. Here are the steps taken. 1. Searched for providers of identified outcomes, using Google, using variations of key words associated with five categories identified by Quantum Learning (DePorter, 2012), 2. The researchers visited and documented content for each website on October 11, 2016, 3. Visited websites using different personal computers (desktops, laptops) with different operating systems (PC's, Macs) and different browsers (Firefox, Chrome), and 4. Assessed the digital approach used by the identified organizations.

Each researcher searched on Google for the same five terms using different browsers to find out which programs were promoting these outcomes. Individual websites of educational programs with high rankings were selected from the outcomes of the internet search. How these organizations used these terms for promotional messaging, was considered as well as the product or service that they are promoting. The focus was on the educational organizations that fit at least four of our outcomes. We considered the type of organization, and whether they were using paid search or organic Search Engine Optimization (SEO). We gathered data on the following factors: 1) live on-demand chat 2) scheduled chat 3) social media 4) blog) 5) Interactive 6) Searchable website. The ranking system of higher scores meant that the website experiences were interactive (Aziz & Kamaludin, 2014). We considered the following factors 1.) Usability – Effectiveness: To what degree can the user complete the goal? 2.) Efficiency – Are resources needed by the user to complete goal available? 3.) Accessibility – Can users get access to what is needed to complete the goal? 4.) Learnability – Can the user learn to interact with the website? and 5.) Satisfaction – To what degree is the user satisfied when interacting with the website? The first level of examination of the websites consisted of looking for evidence that the site was addressing one or more of the search criteria. We initially identified 20 websites by using the 5 key phrases (i.e., keywords) in searches using Google. We then narrowed down our 20 websites to a list of 11 finalists, who had at least three of our key phrases. (A description of the websites are found in Appendix 1).

Once these websites were identified, each was visited separately by each of the researchers to make a judgment about whether the search criteria were significantly addressed on the website. At a minimum, websites were expected to make information available to assist visitors in the selected areas or indicate clearly that such information would be available upon joining the organization or purchase of services. Those websites that addressed a minimum of three of the five criteria were retained for the study.

Table 1: Search Engine Results from Keyword Search, March 2016

Organization	Org Type	School Culture	Academic Performance	Emotional Safety	Decrease Behavior Problems	Physically Active Class Room
New York State Board of Ed.	GOV	X	X	X	X	X
Greater Good Science Center	ORG	X	X	X	X	X
American School Counselor Assoc (ASCA)	ORG	X	X	X	X	
Association of Suspervision & Curriculum Development (ASCD)	ORG	X	X	X	X	
Counseling in Schools	ORG	X	X	X	X	
Edutopia	ORG	X	X	X	X	
FISH!	COM	X	X	X	X	
National Assoc.of Elementary School Principals (NAESP)	ORG	X	X	X	X	
Success for All Foundation	ORG	X	X	X	X	
We Are Techers	COM	X		X		X
National Center on Safe Supportive Learning Environments	GOV	X	X	X		

Table 1 identifies the presence of the various search criteria. The organizations presented in this table were those organizations that addressed at least three of the five criteria.

Table 1 lists the top websites in our search results based on the five criteria selected. Two of the selected had all five categories in our search results. Seven of the websites had four criteria. Two websites had three of the criteria.

RESULTS AND DISCUSSION

In Table 2, the researchers report on the ways in which the website offered opportunities for interaction with visitors. It is a report of whether there is live or scheduled chat, blog, interctive elements and the search website option. None of the websites used live chat and only one offered a scheduled chat. Four of the websites had a blog. Two websites offered interaction. Seven of the websites offered a search of the website. National Association of Elementary School Principles had scheduled chat, blog and search option on the website.

Table 2: Interactive Analysis of Websites

Website	Live Chat	Scheduled Chat	Blog	Interactive	Search Website
NY State Ed Dept.	no	no	yes	No	yes-Google
Greater Good Science Center	no	no	no	Take a quiz	yes-Google
American School Counselor Association	no	no	yes/vlog*	no	yes
Assoc. Supervision& Curriculum Dev.	no	no	no	no	yes
Counseling in Schools	no	no	yes	no	yes
Edutopia	no	no	no	no	no
FISH!	no	no	no	no	no
Nat Association of Elementary School Principals	no	yes	yes	no	yes
Success for All Foundation	no	no	no	no	no
We Are Teachers	no	no	no	no	no
National Center on Safe Supportive Learning	no	no	no	Take a poll	yes

*Table 2 displays the categories of interaction available on the website. A "no" indicates the website does not offer this type of interaction to site visitors. *indicates video blog*

The websites were then evaluated using the five criteria developed by Aziz & Kamaludin (2014), Usability, Efficiency, Accessibility, Learnability, and Satisfaction. Table 3 reports the results of the website evaluations. Each website was rated on each of the criteria which yielded both individual scores as well as an overall rating. This process allowed for discernment among the websites and several were superior to the others. Four of the ten websites had the same highest total score in this process. Three websites were consistently the lowest scores in each category. The learnability scores were the lowest scored category overall, indicating that the websites were not necessarily easy to interact with and learn. This is ironic as they are all in the education industry. The highest score was 20/20 for We Are Teachers. Tied with 19/20 points were FISH! Philosophy, Edutopia, ASCD (Association for Supervising and Curriculum Development and ASCA (American School Counselors Association).

Table 3 reports the following data. Three websites stood out to the researchers: FISH! Philosophy, We Are Teachers, and Edutopia. These websites had a clear webpage that was useful and responsive. The FISH! Philosophy website had prominent links to social media, including Facebook, Twitter, Linkedin, and YouTube platforms, and clear 'contact us' information, including a web capture form which set expectations as soon as visitors arrived on the website. There were no live chats offered in any of the educational websites, which seemed to be an interactivity opportunity missed by all of the organizations in the study. Although the New York State website had extensive content that would be helpful to educators, it consistently rated at the bottom of the five measurement scales for this study. The website was simply a document repository that could be accessed if the visitor knew the exact document being sought. It did not allow for easy browsing of documents or searching by key words. It also was consistently very slow to load; even the home page took longer than expected time for any information to appear on the computer, tablet, or mobile screen. Berkeley's website was interactive, friendly and engaging. It had content that appeared to be valued by frequent users. However, the Berkeley.edu website was too busy, with so many options that it made choices of where to focus more difficult for the user. The organization of the website did not guide the attention of the visitor. The National Association of

Elementary School Principals website reflected a leadership-oriented experience and scored more moderately on the measurement scales.

Table 3: Results of Website Evaluations

	Usability	Efficiency	Accessibility	Learnability	Satisfaction	Total
Counselors in Schools	1	1	1	1	1	5
New York Dept. of Ed.	1	1	1	1	1	5
Success for All	1	1	1	1	1	5
Greater Good	2	3	4	2	2	13
Safe support	2	2	4	3	2	13
NAESP	4	3	3	3	3	16
ASCA	4	4	4	3	4	19
ASCD	4	4	4	3	4	19
Edutopia	4	4	4	3	4	19
FISH! Philosophy	4	4	4	3	4	19
We Are Teachers	4	4	4	4	4	20
Total	**31**	**31**	**34**	**27**	**30**	

Table 3 displays the results of the application of the evaluation criteria from Aziz & Kamaludin (2014). We Are Teachers was the most consistent in its performance against these criteria.

The FISH! promotion focused on selling their products and services. Scoring well on the measurement scales, FISH! offered an interactive customer experience using the tools on the website. Most of the other educational websites did not provide a memorable user experience, because they were mostly about them only and not about the benefits they brought to the user. They seemed very self-promoting and bureaucratic. They looked like they were created by committees, rather than to service a specific audience. They were trying to satisfy many audiences, and therefore satisfied very few. For these reasons, these websites scored lower on the measurement scales. One .org that did get positive interaction was Success for All Foundation (successforall.org). Even though the website was not interactive, the content was effective through the technique of presenting the story of the brand. We are Teachers, FISH! Philosophy and Edutopia were the top three most effective websites on PC's when looking at usability, efficiency, accessibility, learnability, satisfaction and a combination of these (Aziz & Kamaludin, 2014).

CONCLUDING COMMENTS

The websites in the study ranged from government agencies to private non-profit organizations to private for-profit companies. For some organizations, the website content was publicly available for free. For others, beyond information to tempt potential members, the information was behind a member login page. The commercial organizations used the website as a lead generator for future sales opportunities and presented enough information to elicit an inquiry about purchasing. The key learnings from the research: 1) Websites with interactive opportunities helped the visit be experienced as more relevant. This allows the visitor to quickly drill down to the information most desired. 2) A focus on the visitor's perspective more than the organization's contributed to a more engaged visit. For example, rather than write, "we're great", successful websites ask "how can we be of service to you?" 3) Effectively used, photos and short videos significantly enhance the visitor experience. Ultimately, the challenge for each website is to weave these approaches into an effective promotional offering that reaches its target market and engages it successfully. The most successful websites were easy to find using a variety of key words in a search and presented the resources necessary for a visitor to accomplish the purpose of the visit. In addition, success was determined when he content on the websites was accessible and visitors could find what they were seeking. When navigation of the websites was straightforward, visitors could easily learn how to interact with the site. Relevant websites provided a positive experience, creating trust in engaging with

the site. The research shows the top five organizations for effectiveness were: WeAreTeachers, Edutopia, ASCD, ASCA, and FISH! Philosophy. The lowest rated websites were: New York Board of Education, Counselors in Schools, and Success for All. What is the usefulness of the study? The results of this study can provide marketers, educators, and non-profit organizations with important guidance as they evaluate and/or revise their websites. Other educational programs, especially K-12, who may be thinking about building or rebuilding a website may be alerted to what they need to use to promote, look, feel and operate more effectively.

Limitations

Although different browsers were used in parallel to examine the websites, the researchers know that websites may display quite differently on different browsers. Timing makes a difference as these are all digital pages, which can be changed instantly. It's possible that some of the websites are already seeing much improved effectiveness since this study was conducted. Internet search engines are dependent on the search algorithms used. Google search results are different based on location, device and search history. The algorithm causes results to be skewed. For example, if an educator in California was looking for an educational program in Austria, and then searched for clothing, the searcher may find results will be retail shops near Austria, not in California. Research initiated on the east coast of the United States might result in important differences in which organizations provide these educational services than this study initiated on the west coast. However, once a visitor logs on to any website, the location of that visitor would have no effect on evaluation of the website. So, the process of the evaluation of the effectiveness of the content on the websites will not be a limitation of the study.

Recommend Further Study

What issues are still needing to be raised? Is this pioneering new research territory in this field? Since the authors could not find any previous research in educational websites, they believe it represents new territory in the field of educational program marketing. This research could be expanded into the Services Marketing field. A similar study could be conducted in the health care field, the only industry that is larger than the two trillion dollar educational program market in the US. In future studies, the authors may evaluate the categories of educational organizations, reviewing .com vs. .net, educational vs. commercial venture, or universities vs. government agencies.

APPENDIX

Here are a few of our exploratory findings about specific websites in the study, which were for-profit, non-profit, public, and private organizations. The New York State Education System, a public non-profit organization, appears to present its information as part of compliance to legal requirements that such information be available, rather than as a communications tool. Berkeley's Greater Good Science Center is a public non-profit organization. The Association of Supervision and Curriculum Development, a private non-profit association is membership focused. They offer services to subscribing members, in the form of paid educational packages that add value for members. ASCD aims for better learners through books, seminars, and more. Their web experience on PC was evaluated as more effective on four out of five of the measurement scales.The National Association of Elementary School Principals, a private non-profit organization for school principals. The website seeks membership from elementary school principals. The National Association of Elementary School Principals website reflects a leadership-oriented experience and scored more moderately on the measurements scales.

We Are Teachers is an educator's website, with ideas, inspiring activities and advice for teachers. We Are Teachers is an online community for educators providing classroom ideas and giveaways to inspire educators in K-12 schools. WeAreTeachers promotes that teachers do more than teach, and speaks to the

most challenging jobs in the world that also is one of the most rewarding jobs. Teachers relate to the way their jobs can be improved with their tools and ideas. One example is a visual image of a smiling woman in a swimming pool about "10 Things Teachers Should Do in the Next 90 Days."Edutopia is a private, non-profit organization. They were founded by the (George) Lucas Educational Foundation and are entertainment-based, and reflects significant resources and creativity associated with a successful organization.Fish! Philosophy uses training videos from Pike's Peak Market in Seattle to help organizations improve teamwork, customer service, employee engagement, leadership and retention through their special training methods. Edutopia is an .org, non-profit organization that looks at assessment, projects for learning, and develops teachers. They use the tagline "join the movement for change" to motivate others to participate.Success for All Foundation (successforall.org) website is effective in telling the story about the programs in pre-school to middle school with USDOE13 grant money.FISH! Philosophy and We Are Teachers were commercial ventures, as reflected by the .com suffix. FISH! is a private, for-profit firm, with events, written material for the K-12 teachers and other organizations.

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ACKNOWLEDGEMENT

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BUSINESS INTERNSHIPS: A PRACTICAL FRAMEWORK

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ABSTRACT

The importance of business internships is well established in the literature. This paper extends a more practical framework for business internship success, achieved through student professional development, and facilitated via implementation of a step-wise construct process: (1) self-development, (2) on-campus development, and (3) applied development. Our construct model and process framework were developed and carried out in an iterative manner over time, beginning in 2010, in The College of Business Administration at Texas A&M University – Kingsville. Metrics serving as proxies for business internship success indicate overall program success thus far, as well as trended improvement based on iterative changes made from 2010 to present. We thus contend that the finalized framework and model of student professional development is well positioned to improve business internship programs in a more holistic manner, at both student and institution (e.g. college, organization) levels. Iterations, outcomes, implications and limitations of the program framework are discussed.

JEL: A220

KEYWORDS: Business Education, Internship, Desired Skillset, Undergraduate Professional Development

INTRODUCTION

Formally acquired knowledge in a collegiate education is not very effective unless business students learn how to apply it and practice it through integration and experience in a professional setting. Case studies, role-playing, business simulations, capstone courses and other types of assignments provide students only limited exposure to and experience with analyzing and solving contextual problems emanating from intricate business situations –which is precisely what students will face in industry upon graduation. Classroom practice affords only a learning primer of how to combine innate intelligence, resourcefulness, a command of analytical tools, imagination, and unbiased judgement in solving diverse business problems. Understanding that internships provide a more advanced and relevant context for student applied development, internship programs have become a staple component of the undergraduate experience in business schools, although these programs vary widely in their requirements, structure and effectiveness.

Internship programs have existed for over a century, dating back to 1906 (University of Cincinnati), and now span over 43 countries – culminating in a large body of extant research which documents diverse aspects of internships (University of Cincinnati Co-op, 2016). This domain could be broadly divided into three categories: (1) descriptive studies of what individual business schools have accomplished (e.g., Johnson and Hancock, 1983; McCaskey and Fedo, 1985; Hite and Bellizzi, 1986; Dommeyer, Gross, and Ackerman, 2016); (2) studies discussing pros and cons of internship programs in general (e.g., Nevett, 1985; McCarrier, 1986; Krohn, 1986; Henry, Razzouk, and Hoverland, 1988; Coco, 2000; Rothman, 2007;

Divine, Linrud, Miller, and Wilson, 2007; Weible, 2010; Green, Graybeal, and Madison, 2011); and (3) descriptive surveys which are mostly national in scope (e.g., Dovel and Dayan, 1982; Clithero and Levenson, 1986; Kelley and Bridges, 2005; Swanson and Tomkovick, 2011; Wresch and Pondell, 2015; Cook, Stokes, and Parker, 2015).

Single-school descriptive studies usually catalogue positive qualitative internship experiences and position "know-how" practices, yet these studies have the same constraint – their findings are limited to one business school. Pro and con discussions of internship program general components is reminiscent of a case analysis, and these studies usually present a recommendation or two on how to improve the student internship experience. The third group, descriptive survey, provides relatively broad and unbiased information about the state of internship programs around the nation. However, it yields little in the way of tangible direction.

In this paper, we take a more practical approach in the development and implementation of a step-wise construct framework which targets improved business internship metrics/results, and heightened overall program success. We also shed light on the importance of internship timing, as sequentially placed within the framework of our three-phase construct model (self-development, on-campus development, and applied development). In addition, model constructs' antecedent and moderation effects are examined through iterative framework changes, step-wise construct repositioning, and practical application over time. Beyond these contributions, this study: delineates the desired skill set students should develop in order to have a successful internship; examines employer opportunity costs of offering and supervising an effective internship; reports on immediate and iterative internship program results/metrics and anticipated future outcomes based on modifications made; and documents internship program impact on a diverse stakeholder group, to include the community.

The expanded scope of this framework and paper is in response to the ever-increasing accountability faced by institutions of higher education - by current and prospective students, their parents, government oversight, accreditation and funding bodies, employers, donors, alumni, and other stakeholders' opportunity costs and expectations. In the coning sections, we will first provide a relevant literature review, and then position the university-specific context of the program. Next, we will introduce the step-wise framework and process map, as well as the construct model. We will then examine internship program results thus far, and conclude with a discussion of implications, limitations, and suggested avenues for future research and practice.

LITERATURE REVIEW

Professional schools, more than other colleges on university campuses, have long recognized the educational value and relevance of student internships. In business education, Henry, Razzouk, and Hoverland (1988) found that academics cooperated with accounting practitioners for over three decades to provide students with hands-on experience in their field before graduation. They cite interesting findings regarding CPA firms' non-participation in internship programs, with the principal reason for noninvolvement being a lack of time needed to organize a successful internship program.

Henry and associates (1988) recommend a practical framework for the administration of a student internship program, to include: (1) appointing an internship coordinator; (2) consulting with accounting faculty and administration to define the nature and scope of the internship program; (3) developing internship guidelines for participating students and sponsoring organizations; (4) developing a professional brochure emphasizing the benefits of the internship; (5) utilizing accounting faculty to recruit qualified students; (6) informing accounting professionals in the area; (7) giving priority to internships with challenging duties and paid internships; (8) pre-screening potential interns; (9) establishing a contract between the student-intern, the sponsoring form, and department; (10) monitoring the intern; (11) conducting intern and sponsoring-firm evaluations; and (11) adjusting procedures if needed.

Raymond and McNabb's (1993) study found that both students and employers value internships because they provide practical experience, sharpen students' critical thinking, communication and interpersonal skills, and give students an opportunity to apply knowledge previously learned in the classroom. In reference to the interview process, Green, Graybeal, and Madison (2011) demonstrated that employers and students are often not aligned in the level of importance each places on specific traits, and by extension which traits receive the most focus in an interview. Understanding this misalignment underscores the need for business faculty to additionally mentor students, with increased emphasis on their transition from academic to professional careers. Faculty-student mentorship helps align perspectives and better prepares students for the internship, and beyond. Additionally, Green and associates (2011) positioned core competencies that graduates should develop, considering them to be essential in the hiring process by employers. For example, employers place significantly greater value on the importance of a strong work ethic, interpersonal skills, and personal traits.

Swanson and Tomkovick's (2011) study of 352 companies who provide academic internships revealed that employers placed highest value on positive attitude, effective communication skills, strong work ethic, and willingness to learn. They also discovered that, over time, companies build relationships with professors and other key contacts within colleges and universities. Thus, students should be motivated and prepared to perform in their internship, because both companies and colleges would be interested and motivated to create and maintain a "win-win" relationship. Weible (2010) found that institutions of higher education use internships as an effective undergraduate student recruiting tool, and by offering an internship program, their reputation in the community is enhanced.

A longitudinal study conducted in 2015 by Cook, Stokes and Parker examined students' attitudes toward specific elements of internship programs. The sample included 816 student-interns from 25 different colleges and universities and their findings corroborate earlier conclusions drawn by Green et al. (2011), namely that employers consistently place highest values on technical and interpersonal skills among business graduates. In addition, interns are seen as the most valuable by companies when completing internships during the junior or senior years. The work of Knouse, Tanner, and Harris (1999) supports the notion that students who complete an internship are more likely to find full time employment upon graduation. Gauldt, Redington, and Schlagar (2000) arrive at a similar conclusion, reporting that students with internship experience find employment quicker when compared to those who did not participate in an internship program. Furthermore, students with internship experience earn higher salaries and have higher levels of job satisfaction relative to those who do not intern.

It is understood that the relationships developed from the internship experience (volunteer or mandatory) impact students, employers, colleges/universities, and the greater community (Rothman, 2007; Divine, et al., 2007; Knouse and Fontenot, 2008). For example, Knouse and Fontenot (2008) recommend that both students and employers be actively involved in creating positive internship experiences, by setting clear expectations and engaging in activities such as mentoring and journaling as part of the internship process. D'Abate, Youndt, and Wenzel (2009) add that student satisfaction levels arising from internship experiences influence overall satisfaction levels from their college academic experience as a whole, because students view the internship as a fundamental part of their learning.

In order to further close the gap between the skills employers expect of freshly minted graduates and the skills taught in academia, it became more customary among business schools to include instruction of a variety of etiquette skills (Kelley, 1992), business protocol (Lazorchak, 2000), job-search etiquette (such as appropriate interview behavior), and use of "thank you notes", among others (O'Briant, 2000; Mood, Stewart, and Bolt-Lee, 2002). Further, business schools also focus on student self-marketing skills (McCorkle, Alexander, Reardon, and Kling, 2003), career development skills (Kelley and Bridges, 2005), engagement in a professional business student club/association, attendance to business association/club meetings, as well as participation in professional career fairs (Wresch and Pondell, 2015).

Legal ramifications of business internships are important to both employers and schools (e.g. Kaplan, 1994; Moorman, 2004; Swift and Kent, 1999). Questions arise specific to 'employment' status, payment of wages, workers' compensation eligibility, as well as liability (school and employer) for student injuries sustained in the workplace. In general terms, answers vary based on interpretation of applicable federal and state statutes, as well as based on the context of the particular internship. Regarding employment status, several factors are considered in determining if a worker is an employee or an independent contractor. Although employment laws do not directly use the word "intern", according to the defining characteristics used, an intern cannot be considered an independent contractor and thus is considered an employee, with all associated rights and legal protections (Kaplan, 1994; Swift and Kent, 1999).

Employers do not have to pay intern wages if the intern can be categorized as a "learner/trainee" under the Fair Labor Standards ACT (FLSA) in accordance with criteria established by the Department of Labor (DOL). Court rulings seem to support that student interns do not qualify as employees for purposes of wage and hour law. This is largely due to the logic behind why internships exist - that they are predominantly for student benefit and are being prescribed as part of the school's curriculum and educational process. Further, due to the underlying premise and intent of workers compensation laws, it is in the best interest of employers to include interns as employees for these rights and coverages. Lastly, answers as to whom may be liable (employer or school) for intern injuries sustained (non-workers' compensation) are found in negligence theory and underlying tenets of duty to care, breach of said duty, student fault, and other aspects of negligence. Schools have been found liable, based on specific circumstances of the case (e.g. Nova Southeastern University, Inc. v. Gross) (Kaplan, 1994).

BACKGROUND ON TEXAS A&M UNIVERSITY - KINGSVILLE

Texas A & M University–Kingsville (TAMU-K) is located in south Texas approximately 100 miles north of the U.S.–Mexico border. Established in 1925 as South Texas State Teacher's College, TAMU-K draws its student population primarily from south Texas and its students reflect area demographics. Of the total TAMU-K student population (9,271 – fall, 2016), 60% are Hispanic, 4% are non-Hispanic, 14% are white, and about 19% are international students.

TAMU-K has five colleges: Agriculture, Natural Resources and Human Sciences, Arts and Sciences, Business Administration, Education and Human Performance, Engineering and Graduate Studies, collectively offering 56 undergraduate degree programs. TAMU-K offered its first business courses in 1925 and established the College of Business in 1929 (TAMU-K, n.d.a.). Ethnically, students attending the College of Business Administration (The College) reflect area and university demographics (60% Hispanic, 20% white, 10% African American, and 6% international). The College offers five undergraduate degree programs in business (i.e., accounting, finance, general business, information systems, management, and marketing) and a Master of Business Administration.

Texas A&M University-Kingsville business majors are required to broaden their education by gaining additional skills and global competencies through participation in an *immersion experience* (students can choose from internship, study abroad, or faculty/student collaborative research project). Students must first successfully complete the Student Professional Development Program (SPDP) as a prerequisite for the immersion experience. The SPDP and Immersion Experience have been graduation requirements for all College undergraduate majors since 2010. However, they were more routinely enforced starting spring, 2014.

The SPDP was designed and iteratively modified to provide learning experiences which help students develop personal and professional skills – with the end goal of giving students a competitive advantage in the job market and beyond. SPDP has traditionally been instructional and interactive in nature, focusing on development of student skills in these four workshops: Career Planning (becoming a business professional),

Professional Appearance (do's and don'ts of business dress), The Job Campaign (developing your professional profile), and Professional Etiquette (dinner and social opportunity). These workshops are completed in addition to the student's degree plan (not offered for course credit) and originally were designed and taught by The College management faculty. However, faculty turnover and budgetary constraints led The College to re-design the format of its SPDP workshops and outsource some of them (Professional Appearance and Professional Etiquette) to the Office of the Career Services (Career Services). Career Services operates in an umbrella manner at the University level and is not housed or dedicated to The College.

In spring, 2014, University administration restructured Career Services, streamlining its services (e.g., it now offers self-assessment, career planning, major selection, resume and cover letter writing, interviewing, internship, and job search), and hiring additional qualified personnel. All internship and job positions are to be posted by employers on Career Services' website. In fall, 2014, to better align with University Career Services, The College designated one faculty member and one undergraduate adviser to oversee and facilitate The College SPDP and serve as liaisons between The College and University Career Services.

The College redesigned the Job Campaign workshop to add networking aspects – as a result of indirect program assessment, the Dean's Leadership Board feedback, employers' feedback, and alumni survey feedback. SPDP workshops were offered once a month, after class hours (usually early afternoon), and were taught by the designated faculty member (i.e. SPDP Faculty Coordinator). Students had to pay a moderate fee $15-$20 per workshop. The College and University Career Services had to keep the cost of workshops moderately priced because the vast majority of the students attending TAMU-K and The College have very low price elasticity (e.g., approximately 80-85% of the students attending TAMU-K receive some form of financial assistance and are Pell-grant eligible). In addition to completing SPDP within The College, business students are required to register with University Career Services (e.g., create a personal online profile, have an updated resume' on file) and attend the semi-annual University Internship and Career Fair.

Beginning fall, 2016, The College added an on-line self-development component of SPDP (4 courses) which must be completed prior to attending workshops. As a result, undergraduate business students participate in professional self-development through a combination of on-line courses (through Bloomberg/Peregrine Academic Services) and workshops facilitated by College faculty. By applying themselves in the program workshops (Discovering Your Option; Sculpturing Your Value Proposition; Selling Yourself; and Activating Your Plan), business students develop a balanced portfolio which reflects their academic, professional, and career readiness objectives. The evolved SPDP is unique to The College and is a student's unique resource in gaining a competitive advantage over other qualified job candidates. The College focuses workshops on personal development, industry and career knowledge, emotional intelligence, networking, and professional image enhancement. The "Job Campaign," an interactive session with a panel of leaders from a diverse mix of business organizations, concludes the SPDP, which is a collective prerequisite requirement to the immersion experience (i.e. business internship).

DATA AND METHODOLOGY

To better equip undergraduate business students for internship success, a framework was built around a step-wise professional development process (Figure 1). Three essential constructs and phases constitute the framework: (1) Self-Development, (2) On-campus Development, and (3) Applied Development. Figure 1 depicts this framework process map, which illustrates these three constructs in a phase-oriented progression, with individual construct components located below each construct. Students must complete the program in sequence. For example, all of Phase 1 (Self-Development – Career Readiness) must be completed before Phase 2 (On-campus Development – Networking) and Phase 3 (Applied Development – Immersion Experience) can be undertaken. Further, within Phase 1 the four component courses must be taken in sequence, and only upon successful completion of Course 1 may a student advance to Course 2, and so on.

Framing the process in this manner helps students stay on track over the tenure of their undergraduate experience, and facilitates increased preparedness for internships, as part of the immersion experience.

Figure 1: Framework Process Map
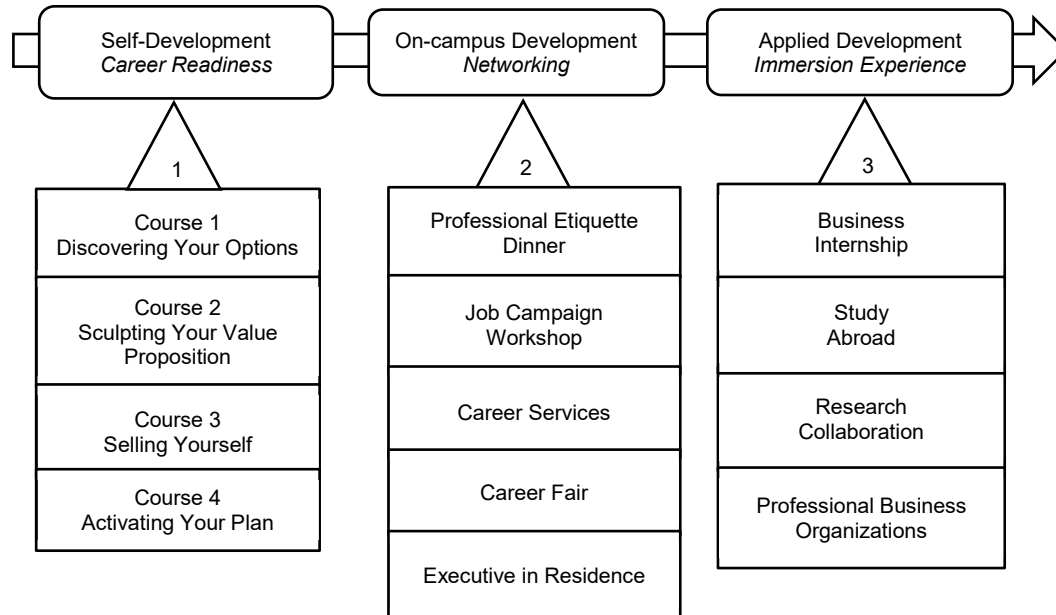
This figure presents the framework of constructs (Self Development, On Campus Development, and Applied Development) and step-wise process map of undergraduate student professional development as antecedent to student business internships. Process numbers (in triangles) indicate the order in which students complete each developmental construct.

Student Orientation and Registration. Prior to beginning the step-wise development process (Figure 1), all students attend an orientation and registration session jointly facilitated by the CBA Faculty Coordinator and Staff Coordinator The purpose of this session is to: orient students to the overall program, get them registered, provide a schedule of dates and deadlines for courses, workshops etc., and motivate them to invest quality effort and dedicate necessary time into the program to achieve results.

Phase 1 Construct: Self-Development – Career Readiness. This construct and phase centers on helping students with self-discovery, and through that, build a foundation and professional profile which they can carry forward throughout their professional lives, beyond their undergraduate experience. Four courses are taken in sequence (Figure 1). Courses are both reflective and formative in nature, helping students discover their strengths and interests, learn how they will add idiosyncratic organizational value, and articulate how to better sell themselves. Course 4 has capstone characteristics in that it leads students through an integration process and provides methodology for formalizing and activating their plan, in accordance with individualized goals.

Phase 2 Construct: On-campus Development – Networking. This construct and phase builds upon the foundation laid in Phase 1, through provision of specific on-campus interactive and networking opportunities/experiences with industry leaders, discipline-specific managers, and recruiters. In addition, students participate in practical workshops centered on building professional profiles, professional etiquette, job campaigning, and branding themselves via networking opportunities.

Phase 3 Construct: Applied Development – Immersion Experience. This construct and phase helps students realize the fruits of their program efforts thus far, in practical application. Applied Development is the

culmination of the entire program and thus serves as our internship framework and model criterion construct.

Iterative evaluations of program effectiveness for the time period 2010 to 2016 led to modifications of existing constructs, the addition of a new construct, and repositioning of constructs in the current model (Figure 2), all for the purpose of improving our criterion construct, Applied Development (i.e. business internship success). Figure 2 illustrates the current relationship model of the three constructs depicted in our framework process map (Figure 1) (i.e. Self-Development, On-campus Development, and Applied Development).

Figure 2: Construct Relationship Model
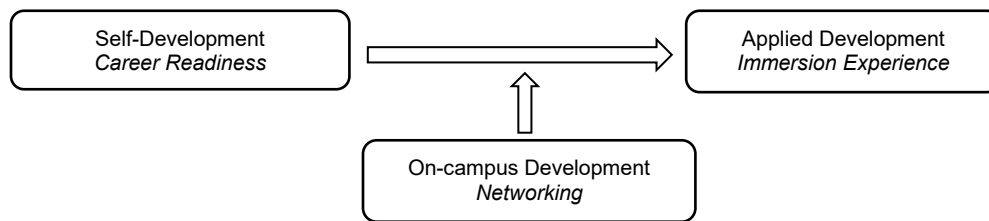
This figure models relationships of the three framework constructs introduced in Figure 1. We determined through the iterative process of program development that On Campus Development positively moderates the relationship between Self Development and Applied Development.

It was understood that On-campus Development, as antecedent construct, had a direct positive relationship with Applied Development. We posited, however, that this relationship could be strengthened by introducing a new construct, Self-development: Career Readiness, as antecedent, and repositioning On-campus Development as a moderator between Self-Development and Applied Development. In combination, adding a new construct, delineating the three constructs more robustly (Figure 1), and arranging the presentation of constructs to students with more specificity (Figure 2), would serve to increase relationship effects on the criterion construct Applied Development. In practical terms, we believed that by introducing networking opportunities (On-campus Development) post self-discovery/self-development, this would improve business internship (Applied Development) success. These construct changes were thus implemented in fall, 2016.

RESULTS

Analysis of AACSB Academic Institutions

In spring, 2017, we reviewed 519 academic institutions and aggregated comparative information/data on internships (requirements and program structure) and career centers (location and structure) (Table 1). As sample, we included academic institutions (public and private) with business schools who are AACSB accredited. Most information was acquired from the AACSB website, supplemented by individual institution websites/homepages. Specifically, Table 1 depicts information gathered on the following internship and career center characteristics: (1) state or private institution, (2) mandatory or optional internship program offered, (3) business internship offered as part of degree plan or stand alone, and (4) career center included within the business school structure or separate from the business school.

Table 1 reports information separately for state and private institutions, in order to facilitate more accurate and relevant comparisons. In aggregate for all institutions reviewed, only 11.2% (58 of 519) require mandatory internships, and for state institutions this number drops to 7% (25 of 354). In aggregate for all institutions surveyed, 72.4% (375 of 519) offer an internship for credit as part of a degree plan, and 36.2% (188 of 519) house a career center within their particular business school.

Table 1: AACSB Academic Institution: Internship Program and Career Center Data

	State Institutions	Private Institutions	All Institutions Combined
Number of Institutions	354 (68% of total)	165 (32% of total)	519
Require Mandatory Internships	25 of 354 (7%)	33 of 165 (20%)	58 of 519 (11.2%)
Have Optional Internships	329 of 354 (93%)	132 of 165 (80%)	461 of 519 (88.8%)
Offer Internship as Part of Degree Plan	269 of 354 (76%)	107 of 165 (65%)	376 of 519 (72.4%)
Offer Internship Outside of Degree Plan	85 of 354 (24%)	58 of 165 (35%)	143 of 519 (27.6%)
Career Center is Part of Business School	138 of 354 (39%)	50 of 165 (30%)	188 of 519 (36.2%)
Separate Career Center	216 of 354 (61%)	115 of 165 (70%)	331 of 519 (63.8%)

This table depicts our research of 519 academic institutions with respect to the following components: (1) state or private institutions; (2) mandatory or optional internship; (3) internship as part of degree plan or stand-alone; and (4) career center as part of business school or separate from business school. Research conducted by the CBA, Texas A&M University – Kingsville.

Texas A&M University Outcomes

As an outcome of the revised SPDP and internship program, students have clearer line of sight between phased constructs and better understand how framework sequencing directly supports and facilitates their professional development, and increases their internship opportunities (i.e., internship selection and successful completion). Phase 1 Construct (Self-development: Career Readiness) serves as the student's indoctrination into the program; the framework and process are introduced in an orientation session led by faculty and staff program coordinators. Initial indicators of program success (Figure 3 and 4) are beginning to show that Phase 2 Construct (On-campus Development: Networking) positively moderates the relationship between the Phase 1 Construct (Self-development: Career Readiness) and the Phase 3 Construct (Applied Development: Immersion Experience). Students are better prepared for networking opportunities availed through the program. They are more confident in communicating their strengths, value proposition, and in selling themselves – which ultimately leads to a more successful internship experience (i.e., landing an internship and successfully completing it).

Specific to internship success, the evolution of our student professional development program (SPDP) has revealed a core prerequisite need, namely that student success and overall program success hinges on following a specified framework and process as antecedent to the internship itself. Stepwise individual student preparation (i.e. following the framework process) better prepares students to secure and successfully complete an internship, and in so doing represent both themselves and their university to the best of their ability.

Through the iterative program changes made over time (2010 – present), it has become increasingly clear that two components are critical to internship program success: (1) student professional development preceding the internship itself, and (2) meeting/exceeding organizational internship needs and objectives. As such, success of our internship program is defined according to these two components. Implementation of the revised internship framework process (Figure 1) and model (Figure 2) has resulted in immediate positive returns, in that internships are increasingly being pursued by students (Figure 3).

Located along the mainline of the Union Pacific and US 77 (designated as future I-69), Kingsville is adjacent to a power corridor that features rail, highway, fiber optic, power transmission and water transportation infrastructure of world-class quality. Corpus Christi International Airport is a 30-minute drive time from Kingsville, the same time to travel from the south side of Corpus Christi to the airport. Kingsville has a pro-business environment supported by local public entities. The Kingsville Enterprise Zone, created in 1999, is an economic development tool that allows the community to partner with the state on local and state tax regulatory benefits.

Many of the College students intern locally with small businesses. The following companies are the most frequent employers of CBA business interns: H-E-B; IBC Bank; First Community Bank; Independent School Districts in Kleberg County and Nueces County; Texas A&M University-Kingsville (CBA provides workforce for Business Office, Department of Marketing and Communication, and Procurement Department); Texas A&M University-Kingsville Foundation and Office of Alumni Relations; Texas A&M College of Pharmacy; Bay Ltd.; Local Chambers of Commerce; Mike Shaw Toyota; Aramark; Corpus Christi Port Authority; and Celanese Corporation.

Figure 3 illustrates internship program percentage growth - measured by number of students completing an internship on an academic yearly basis, with 2013/2014 set as the baseline against which 2014/2015 and the academic years following are compared. In addition to growth in the number of student internships secured and completed, the number and diversity of organizations participating in SPDP and the internship program is also increasing. For example in 2014/2015, 55 students secured and completed a business internship, which is reflected in Figure 3 as an internship program growth of 103.7% (rounded to 104%) over the prior year (2013/2014), which had 27 students completing an internship.

Figure 3: Internship Program Growth
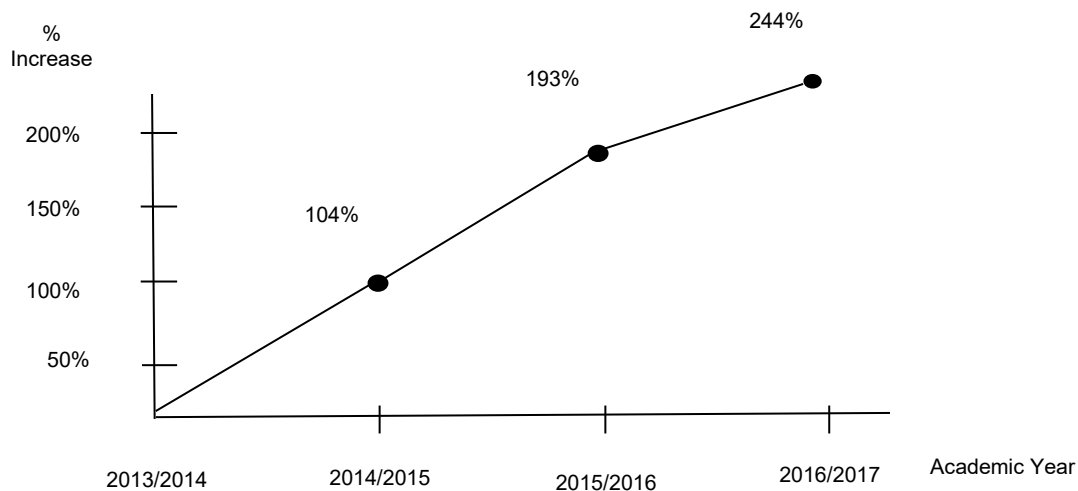
This figure illustrates internship program percentage growth measured by number of students completing an internship on an academic year basis. 2013/2014 is set as the baseline against which 2014/2015 and the academic years following are compared.

The College currently has five student led and faculty sponsored professional business associations and clubs: Accounting Society; Financial Management Association; Association of Information Technology Professionals; Delta Sigma Pi; and Javelina Marketing. In addition, as a result of program success and growth, The College is creating a new student chapter of The Society for Human Resource Management (SHRM). An additional indicator of the step-wise framework and internship program success is that more students have joined and become more engaged in these professional business associations/clubs. As student membership in professional business associations/clubs rises, so does their successful selection and completion of business internships.

Figure 4 depicts student engagement growth, reflected as a percentage of students engaged in (members of) professional business associations/clubs during a given semester, compared to (divided by) BBA degrees awarded at the end of that semester. For example, in 2013/2014, 26 students were engaged in business professional associations, compared to (divided by) 56 students who graduated with BBAs that semester, which represents 46.4% (rounded to 46%). In 2015/2016, 63 students were engaged in business professional associations, compared to (divided by) 88 students who graduated with BBAs that semester, which represents 71.6% (rounded to 72%).

Figure 4: Student Engagement Growth
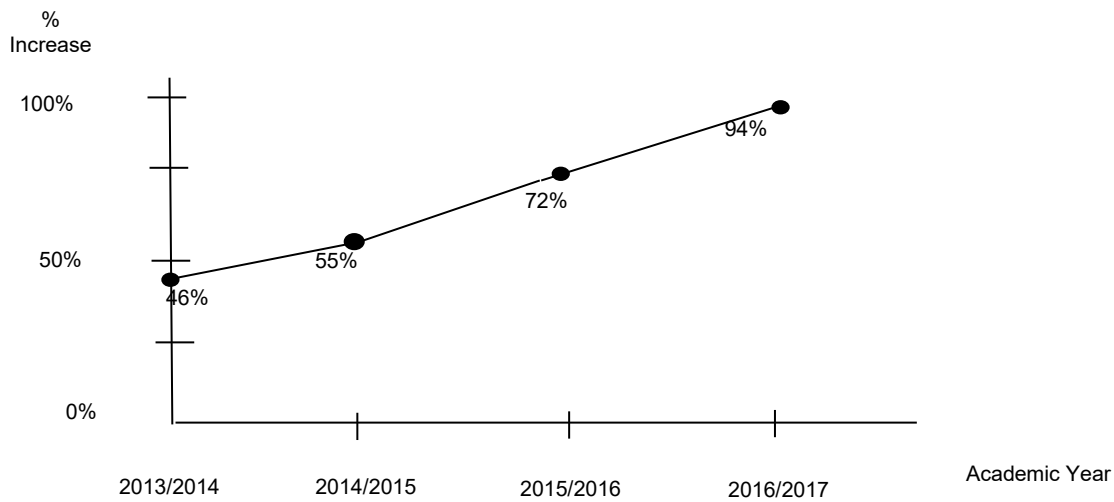
This figure depicts student engagement in business professional associations/clubs as a percentage of BBA degrees awarded. In other words, for all students graduating with a BBA degree, this percentage were engaged in business professional associations/clubs. (Senior Survey)

The SPDP and Internship Program significantly benefit from vested faculty and staff engagement. Having designated faculty (management) and staff (undergraduate adviser) assigned to this program (development, implementation and maintenance) helps streamline and facilitate communication between companies and The College, as well as University Career Services. It also helps reinforce the program framework and step-wise completion process in that the faculty and staff coordinators set clear expectations of all participants, ensure proper reporting, keep lines of communication and feedback channels open, and assist with managing employers' opportunity costs (i.e., offsetting costs by improving business intern skill-sets). We further find that additional value is created in the internship program for all parties, by pre-screening students after their junior year, implementing a well-structured internship project (individual) mentored by a dedicated company representative, and having clear goals and deliverables for all parties.

As a practical example of internship program success and company-specific opportunity cost offset, one of the companies in our program, Bay Ltd., implements 50% of student-intern projects, as facilitated under the mentorship of a dedicated company representative, who is also an adjunct lecturer at The College. Consistent and timely student job search, although improving, remains a challenge for The College, largely due to cultural influences of the surrounding demographic. Current business students and/or recent graduates may turn down a repeat internship, a paid internship or an out-of-town job offer because of the strength of family relationship ties and traditional routines, thus limiting themselves to local professional opportunities only.

CONCLUDING COMMENTS

This paper extends a practical framework and model of student professional development which positively influences business internships. Within our study, business internship success is operationalized in both academic institution and student specific terms/metrics. We outlined just how the step-wise framework was created and implemented in our college specific context, and documented the iterative process whereby improvement was attained. The model and step-wise framework consists of three constructs – (1) Self-Development – Career Readiness, (2) On-campus Development – Networking, and (3) Applied Development – Immersion Experience – which was developed and tested over time in practical application, using as sample all undergraduate business students. We have full participation of all undergraduate students because this is a mandatory program, but is not offered for credit hours as part of their degree plan.

Metrics serving as proxies for business internship success indicate overall program success at both the individual student and academic institution levels. For example, the number of students who successfully secured and completed an internship more than tripled over the three year period of this study, from 2013/2014 to 2016/2017. This was further positively influenced by the dramatic increase (46% to 94%) over this same three year time period in the number of students engaged in business professional associations/clubs, relative to the number of BBA degrees awarded during the same timeframe.

Students advance through the program (i.e. framework process) as a cohort, which helps them share learning experiences and personal development stories with one another. This helps them stay on track and keep motivation levels higher on the collective. Practical implications can be viewed from diverse perspectives: student, student family, program, college, university, organization, and community. Certain benefits are self-evident, in providing a practical framework for student professional development. For first-generation college students, however, these benefits may be additionally important for themselves and their families. Resources directed by The College toward creating, modifying, and maintaining this program are paying dividends in the form of improved internship results (increased student completion rate, increase in number of participating organizations, improved student development and preparedness, and increased program visibility in the community).

Organizations likewise benefit from employing graduates whom have had the opportunity to complete this program. Upon graduation, students may be less likely to leave initial employment because they have learned more about themselves as a result of program completion (through self-discovery program components), and may have a greater understanding of how their strengths add specific organizational value. This may have a two-pronged benefit in reduced turnover and increased organizational identity and commitment. Academic institutions may benefit from our experiences and the iterative changes made to this program over time. Using the framework process and construct model as a road map may help other institutions further develop their own programs, and do so in an expedited manner.

Certain study and paper limitations are self-evident. Development of this practical framework for student professional development and business internship success is both formative and reflective in nature, based on particular study idiosyncratic characteristics (e.g. student demographics) and context (e.g. university, college and community demographics). The program on whole thus may not fully generalize to institutions with divergent characteristics and contexts. In these instances however, we contend that specific benefits can be found in certain component constructs, phases and aspects. To assist with comparisons, we examined 519 AACSB accredited academic institutions and aggregated information on internship programs and career centers (Table 1). Future research would benefit from examining this construct model and step-wise framework in other academic contexts, and possibly not limited to business schools only.

The overarching goal of our program, as reflected in this study and paper, is to afford all undergraduate business students with a practical and time-bound framework for their development (self-development, on-campus development, and applied development), and in so doing better prepare them for a successful internship experience, as well as a rewarding professional career of their choosing. We believe others may benefit from our experiences, iterative modifications, and resulting model and framework, as positioned in this paper.

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INSTITUTIONAL FACTORS INFLUENCING LEBANESE STUDENTS' DECISION-MAKING PROCESS IN CHOOSING A BUSINESS SCHOOL

Rana Sabra, Grenoble Ecole de Management

ABSTRACT

This article seeks to understand the impact of different institutional characteristics on the decision-making process of grade 12 students deciding to enroll in a business school in Lebanon. Ten institutional characteristics are considered in this research, which surveyed 578 students across the country. The data was collected from both public and private schools, and is selective to grade 12 students interested in attending a business school after graduation. Our findings offer business school administrators and the marketing departments at universities important information with which to better focus their resources (people, money, time, etc.).

INTRODUCTION

Today's schools of business play a vital role in shaping globalization as they provide corporate managers and executives with a global vision (Marginson and Wende 2007). As such, the training these schools offer has grown dramatically in demand. Today, business schools are one of the areas of greatest growth in academia (Marginson and Wende 2007, 7), with over 8,000 such institutions worldwide (Trapnell 2007). The growing number of business schools means that these institutions compete for market share, seeking to maximize enrollment. As such, it is important for university administrators and marketing departments to understand what drives students to choose one option over the others. Research reveals that an educational institution gains a competitive advantage when it treats students as customers whom it seeks to "attract, retain, and serve" (Seeman and O'Hara 2006, 32). As such, a one-size-fits-all decision-making model is no longer effective in response to the behavior of today's students, who are steadily increasing their involvement and selectivity when determining which school they will attend (Felix 2006). Consequently, to design effective marketing strategies, it is critical to identify which factors are considered most important by students in their decision-making process.

This paper examines Lebanese secondary students' decision-making processes in selecting a business school to attend, looking at the following ten factors identified through the literature as being the most influential: tuition fees, international network, corporate image, admissions criteria, faculty reputation, facilities, career services, variety of programs, local government accreditation, and international accreditation. A quantitative experimental study surveying 578 grade 12 students across Lebanon was then conducted to identify which of these institutional characteristics students in fact consider in their decision-making process, and in what order these factors rank in importance. Our results offer critical insight into how students choose which business school to attend, information which may help business school administrators and marketing departments at universities to better focus their resources (people,

money, time, etc.).This article begins by presenting the current key models of the decision-making process. The second section tackles the specifications of this research and describes the factors affecting the process of choosing a college. This article hopes to not only reveal the factors that are involved in the decision-making process but also to present the importance and ranking of institutional characteristics in the eyes of the students in the Lebanese market. The third section of this paper reveals which factors are most important specifically to Lebanese high school students, and why. This discussion is followed by a description of the methodology of the study, and a presentation of the findings. The final section of this paper summarizes the findings and suggests directions for future research.

LITERATURE REVIEW

When consumers decide to purchase a product or service, they are selecting it from a set of alternative options, including a non-purchase. To understand this decision process, various models have been created that include psychological, social, and cultural factors. Schiffman and Kanuk (2010) explain that a common approach is to break the process into three stages: The Input stage, which includes the company's marketing efforts and the social environment surrounding the customer; the Process stage, which includes the psychological field, the need recognition, the search, and the evaluation of alternatives of a certain product; and the Output stage, which includes the purchase and the post-purchase evaluation. Alternatively, as illustrated in Figure 1, the consumer decision-making process can be divided into five stages: (a) problem/opportunity recognition, (b) information search, (c) evaluation of alternatives, (d) purchase decision, and (e) postpurchase evaluation (Schiffman and Kanuk, 2010).

Figure 1: A Model of Consumer Decision-Making (Schiffman and Kanuk, 2010)
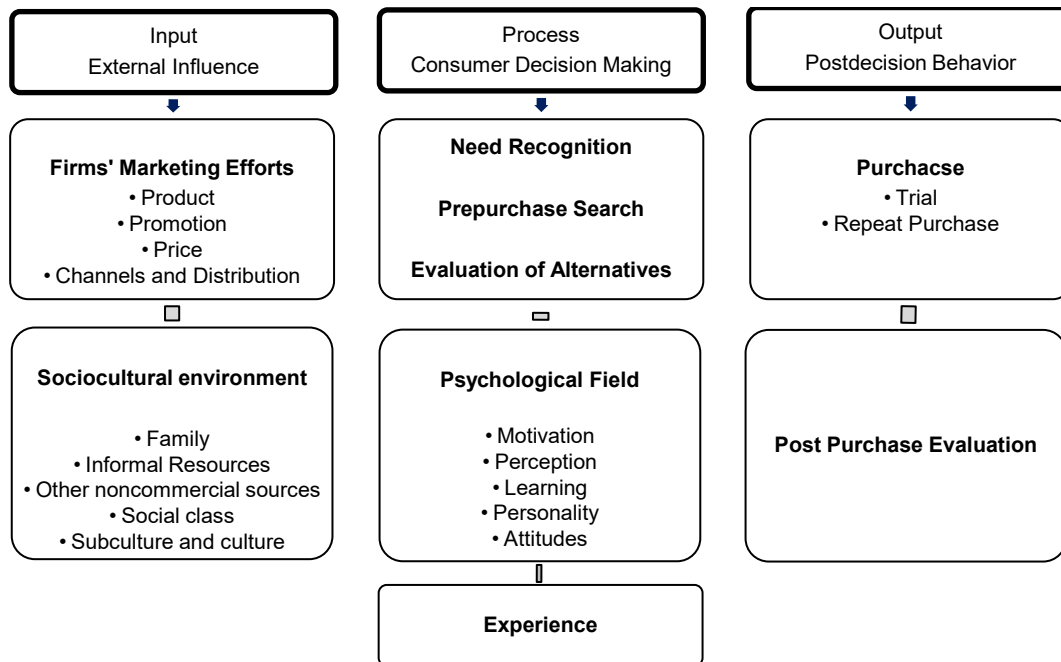
This figure depicts the common approach to understanding the decision-making process, which is to break the process into three stages: The Input stage (external influence), the Process stage (consumer decision making), and the Output stage (post-decision behavior) (Schiffman and Kanuk, 2010).

An earlier study by Hauser and Wernerfelt (1990) adopted the cost-benefit approach to understanding decision making where customers are assumed to "follow a rational and deliberate behavior based on maximum desirability," while approaching decision-making as a "deliberate heuristic" process that examines different brands and gains knowledge through the re-buying experience (Namin and Vahid,

2012). Although the major stages of decision-making are similar for different types of industries, the factors evaluated vary among customers and types of products or services being evaluated. In the case of higher education, today's students differ from those of preceding generations; consequently, the factors influencing their decisions are very different from those previously considered (Domino, Libraire, Lutwiller, Superczynski, and Tian, 2006). Current college decision-making models identify both institutional and student characteristics as being influencing factors; specifically, relevant student characteristics include: the personal (academic ability, gender, etc.) and family background of the students, the market conditions, economic incentives, and political factors (Lillis and Tian, 2008). This paper focuses on the impact of institutional characteristics on the college decision-making process with respect to the selection of business schools.

Influencing Institutional Characteristics

With the steady growth of institutions competing for market share, today's students are presented with many alternatives from which to choose. In their study of the search phase of the college choice process, Shaw, Kobrin, Packman, and Schmidt (2009) found that students have considerable access to information—about, for example, the university, its alumni, faculty, and competition—as it is easily disseminated by technology. Universities are therefore interested in investigating the expectations of prospective students and their families (Lillis and Tian, 2008). The key institutional characteristics contributing to the formation of students' final decision have been identified as the following: Tuition fees, international network, corporate image, admission criteria, faculty members, facilities and technology, career services, variety of programs, Lebanese government accreditation, and international accreditation. Each of these factors will now be discussed in turn.

To begin, economic factors involved in attending a university, in particular tuition fees, strongly influence a student's decision-making process. Total cost is closely evaluated when finalizing the decision about which institution to enroll in. In a study that assessed the factors affecting a student's college preference—both when their educational reputation was and wasn't being considered—the deciding factors were still the cost of tuition, room and board, etc. (Domino et. al, 2006). Indeed, Kumar and Sachan (2006) noted that fees are inversely correlated with the decision to enroll in one specific institution over another. Furthermore, when comparing the college decision-making process of students in New Zealand and the United States, Ford, Joseph, and Joseph (1999) found that, for both groups, "the cost of education is an important factor in the decision of which university to attend".

Value for money is also an important factor in the students' decision-making process, reflecting the aforementioned "consumerist behavior" (Felix, 2006) researchers are observing. Indeed, students are found to weigh both the costs (total investment of fees, time, and expenses) and the benefits (life time earnings and enhanced job satisfaction) of postsecondary education (Alves, 2011). Opportunity for international networking is the next factor to be considered. International networks, in this context, include international alliances, agreements, and collaborations between a university and other international educational institutions and organizations for the exchange and transfer of students, faculty, and resources. Students perceive international networks positively, and some consider strong networks to be an assurance for their mobility and recognition of their degree by the labor markets (Sabra, 2013). Fourteen out of 24 higher-education experts participating in a qualitative study expressed that students are aware of international networks, they know that these networks are useful to them, and are influenced by the opportunities the presence of such networks offer when deciding to join a university (Sabra, 2013). Another study, by Kumar and Sachan (2006), listed international collaboration as the fifth most important factor affecting college choice for business schools.

The next factor to be considered is corporate image. When evaluating institutions, a college's reputation is very important (Lillis and Tian 2008) and there is a definite correlation between its reputation and the

likelihood of it being favored by applicants (Sia Kee Ming 2010). Indeed, Reddy (2011) found that, for prospective students, "brand image" is important when choosing a business school, especially with the increased perceived risk of investment of both time and money. The preconceived image of the "ideal" institution guides students through their decision-making process. This notion is formed by the students' local and familiar sources and experiences—mainly schools close to home or attended by family members (Kinzie, Palmer, Hayek, Hossler, Jacob, and Cummings, 2004). Students create their perception of an institution based on different factors, such as the satisfaction of people they know who attended or have graduated from those institutions (Felix, 2006). As such, institutions cannot only rely on ads and publicity, and need to provide the public with tangible evidence to support their claim of good quality.

Another factor in students' decision-making process is the admission criteria; that is, how difficult it is for students to join an institution. Domino et. al (2006) found that if an applicant perceives that any average student can easily be accepted, then s/he will lose some interest in that institution. The criterion for accepting students is crucial, as it sets a higher bar and reflects positively on the institution's reputation (Domino et. al, 2006). Demanding entrance requirements give the student the feeling that s/he will be joining classmates of a higher academic ability. Having pre-enrollment requirements reflects that there is a higher demand for that institution and that it can be selective when accepting students of a certain caliber. Faculty reputation also influences students' decision-making. In the study mentioned earlier, faculty strength was found to be the third most important factor affecting college choice for business school enrollment (Kumar and Sachan, 2006). Faculty members' reputation is incorporated in the quality of the university where they teach. Reputable faculty members have a positive influence on students' perception of a university, attracting more students to enroll. To promote a successful higher education degree, the faculty members—who, ultimately, deliver the product (education) to the students—need to be credible (Sabra, 2013). The quality of facilities and available technology on campus also influence students' decision making. In a study by Johnston (2010), student interviews revealed that visiting a campus has a strong influence on their decision-making process. Similarly, Domino et. al (2006) demonstrated that both the location of the campus and its surroundings are influential in the students' decision-making process. For many, being located next to leisure areas (such as restaurants, theatres etc.) is important; "students want to attend a college that provides entertainment and an atmosphere that will accommodate their needs as well as their wants" (Domino et. al, 2006).

According to Kinzie et. al (2004), joining an institution closer to home is also an important factor in the decision-making process, since living with parents may decrease the students' cost of living. This is particularly true in Arab culture, where it is customary for parents to continue assuming the responsibility for such expenses. Accordingly, most students consider closeness to home to be an important factor when choosing an institution (Kinzie et. al, 2004). Many students seek higher education to increase their odds of getting a better-paid job, and not as a "place to pursue the love for scholarship" (Felix, 2006). As such, strong career services are found to be yet another important factor that students consider. Domino et. al (2006) found that, while economic factors are usually very important, students are willing to sacrifice certain commodities or luxuries in hopes of better pay down the road. They perceive a postsecondary education as a source for knowledge and an opportunity for a better job after graduation (Domino et. al, 2006). Even students who were reluctant at first to join a university came to realize that such a degree would provide them with a competitive advantage when seeking a career (Foskett, Roberts, and Maringe, 2006). Students also seek schools with a wide variety of available programs of study. A quantitative study by Joseph and Joseph (2000) examined a sample of potential students from Indonesia and found that they took into consideration the range of academic programs, courses, and specialty programs available when selecting an academic institution. Another study, comparing New Zealand and American students, concluded that in both regions "program issues" ranked very high in importance when evaluating a college (Ford, Joseph, and Joseph, 1999). A more recent study identified that it is essential to students that a school offers their desired program (Sia Kee Ming, 2010). Indeed, Domino et al. (2006) found that "if their major is not available, they will not go to that college".

Students examine the diversity of the programs offered by the institution and will not attend a college if their desired program of study is not available at that institution. The next factor to be considered is government accreditation. This factor is a significant component in the students' process, especially for students in Lebanon, for two main reasons. First, Lebanese parents—who are highly involved in the selection of the institution—consider government accreditation an assurance of the quality of the degree offered (if the student chooses a private university). Second, in order to secure a job in the public sector, a student's degree must be certified by the government. A qualitative research targeting specialists in the higher education sector confirmed that government accreditation is an important factor in the decision-making process (Sabra, 2013). In most countries in the Middle East / North Africa (MENA) region, government agencies do not recognize degrees from local institutions that do not hold a license and accreditation from their respective education ministries, regardless of the type of international seals the institution may have acquired. As such, graduates of such institutions (i.e. those that might have international accreditation, but no government accreditation) can only target private employers (Thomas, 2011). The lack of government accreditation might put the unaware students at a major disadvantage when seeking a job in their own countries.

Finally, international accreditation plays a strong role in students' choice of school. Challa, Kasper, and Richard (2005) reported that international accreditation serves as a positive marketing tool as the granting agency promotes successful universities. Furthermore, quality labeling has recently become more popular as a means with which to assert an institution's quality claims (Verbeke and Roosen, 2009). In the academic world, international accreditation is a very good example of a quality label that reflects a high level of education offered by an institution and its commitment to its mission statement (Sabra, 2013).

The College Decision-Making Process in Lebanon

Lebanon's higher education sector began in the nineteenth century with the founding of the American University of Beirut in 1866, Saint Joseph University in 1875, and the Lebanese University (public) in 1953. Today, Lebanon's higher education sector includes a total of 43 institutions including: one public university, thirty-two private universities and institutions, seven private university colleges and institutions, and three private university institutes for religious studies (Lebanese Ministry of Education and Higher Education n.d.). When comparing the factors that affect the selection of a postsecondary institution by students from two different countries (New Zealand and the United States), Ford, Joseph, and Joseph (1999) noted a discrepancy between the results of the two countries. Socio-cultural factors, they concluded, play a significant role in the decision-making process. As such, the results from one country reflect the specification of that nation and cannot be generalized to other countries. Thus, they argue, "trying to develop a single model of important factors to apply cross-culturally might be a mistake" (Ford, Joseph and Joseph 1999, 182).

Recognizing cultural and geographic differences is especially important when trying to draw conclusions from studies conducted in vastly different contexts. As such, relying on research conducted in western countries might lead to the wrong deductions about the Lebanese market. Local studies of student decision-making factors surrounding business school choices are therefore likely to be more relevant than extrapolated insights from abroad. Abou Nassif (2011) conducted a study in Lebanon that sought to identify which variables guide high school students when choosing a college, without specifying the type of college. The most influential factors, in descending order of importance, were found to be: (1) the influence of the parents in the decision-making process, (2) the family income, (3) the cost of the college, (4) the influence of friends and friends' institutional choices, (5) the location of residence, (6) the student's religion, and (7) the student's gender (Abou Nassif 2011).

Of note, parents, family income, and cost of college were found to be interrelated variables. For example, parents were more likely to encourage students to attend an institution with tuition fees they could afford (Abou Nassif, 2011). The impacts of these three variables on the decision-making process are intensified in the Lebanese context by the fact that, in Lebanon, parents are the main providers of college fees (Chenoweth and Galliher 2004). Furthermore, it was observed that after narrowing down the choices based on affordability, the friends' effect on the choice process became more important (Abou Nassif 2011). The location of the university followed in level of importance, as enrolling in an institution distant from home would lead to the extra costs of lodging, transportation, food, etc. Finally, contrary to research conducted outside Lebanon, this national study concluded that "there is not a one-size-fits-all ranking for the factors that affect choice of college bound students in Lebanon" (Abou Nassif 2011). For this reason, this study aims to detect a more detailed and nuanced list of decision-making factors that are specific to the Lebanese higher education market and that can be applied to countries in the same region who share similar environmental factors (culture, demographics, and economic).

The results of this research will provide further support to the literature on business school enrollment in Lebanon as it evaluates the ten factors, discussed above, involved the decision-making process of local high school students wanting to attend a business school for their postsecondary education. For a student seeking to study business, the choice of which institution to join represents the foundation of their future. It is no surprise, therefore, that Reddy (2011) found that students exert considerable effort assessing the different programs available. Marketing must therefore be effective as students are investing in an "infrequent buying" process, where differentiation is highly important (Reddy, 2011). Research exploring the decision-making factors relevant to the Lebanese market, however, is scarce, a gap that this study attempts to narrow.

METHODOLOGY

Quantitative research is important for investigating the institutional characteristics that affect students' decisions as there is a paucity of resources that explain students' business school attendance decision-making process in Lebanon. Furthermore, preliminary research found that many Lebanese institutions are investing time, effort, and money in pursuing international accreditation without a clear understanding of stakeholders' level of awareness of it, desire for it, or its impact on their decisions. Consequently, and to clarify the ambiguity surrounding a very vital topic for the development of the educational sector in Lebanon, this quantitative experimental research study has been conducted. Most research to date has been conducted among university students, after their college decision has been made. In contrast, using a quantitative survey, this study explores the decision-making process from the perspective of high school students, before they have finalized their decision-making process.

In this research, the object's understudy is high school students and their decision to enroll in an institution of higher education. According to Creswell (2009), true experiments are those where subjects are randomly assigned to different treatment conditions. As such, the students receiving the survey with information on international accreditation were randomly chosen in each classroom. With the focus of the research being on business schools, only students who considered pursuing a business degree were invited to participate. Participants from each high school were given a scenario describing a fabricated "ABC University" in Lebanon. This university incorporates all the factors that students might be attracted to, including: average tuition fees, international networking, positive corporate image, a credit-based educational system, knowledgeable faculty members, up-to-date technologies and facilities and various campuses, and career services, a variety of programs, and government accreditation. Participating students were asked to read the scenario and then answer questions regarding the importance they placed on each characteristic of ABC University. The students were told that the purpose of the questionnaire was to determine how likely they were to enroll at ABC University.

A 31-question survey (see Supplemental Attachment 1) was distributed to students in their classrooms with the presence of a school staff member to ensure a higher level of response, and to increase the sample size without prohibitively increasing the cost of research. This method offered reliable and efficient coverage of students from all six provinces in Lebanon.

<u>Questionnaire Design and Administration</u>

The objective of this quantitative study was to evaluate the institutional factors included in high school students' decision-making process around business school choice. Simple wording was used in the questionnaires to ensure the questions were clear and straightforward. They were first written in English and then translated into Arabic by a professional translator. Another translator then reviewed both versions to ascertain simplicity and precision in the wording. Moreover, to minimize the effect of language difference—between the literature on international accreditation and the native tongue of interviewees—on the research results, the questionnaires included both the English and the Arabic verbiage. A Likert Scale was employed to pinpoint the factors considered by Lebanese students when deciding which university to attend. The Likert Scale ranged from "not important at all" to "very important", and from "strongly disagree" to "strongly agree."

An institutional characteristics scale was introduced into the questionnaire to calculate the overall evaluation of the ten institutional characteristics that are considered in the research. These characteristics were chosen after combining the results of both the literature review and previous qualitative research. The institutional characteristic is a formative scale as it is an explanatory combination of its factors, where each factor represents an independent dimension in its own right (Bucic and Gudergan, 2004). The scale includes the mean value of the students' evaluation of the (a) tuition fees, (b) international network, (c) corporate image, (d) admission criteria, (e) faculty members, (f) facilities and technology, (g) career services, (h) variety of programs, (i) Lebanese government accreditation, and (j) international accreditation. The scale is reliable as Cronbach's alpha = 0.813 > 0.70.

Table 1: Scale Used in the Model

Scale	Origin	Questions Included
Institutional Characteristics	Combination of the literature review and the qualitative research of this study	Question 1 a. Tuition Fees b. International Network c. Corporate Image d. Admission Criteria e. Faculty Members f. Facilities and Technology g. Career Services h. Variety of Programs i. Lebanese Government Accreditation j. International Accreditation

This table depicts the institutional characteristics scale that was used in the questionnaire to calculate the overall evaluation of the ten institutional characteristics considered in this research. These characteristics were chosen after combining the results of both the literature review and previous qualitative research. The institutional characteristic is a formative scale as it is an explanatory combination of its factors.

The aim for the sample was to survey students with different social and economic backgrounds. Accordingly, sampling was diversified to include students from different geographic areas (Table 2), from different types of high schools, and with varied aspirations for higher education. As such, both private and public schools were randomly selected from each of the six major provinces in Lebanon: Beirut, Mount Lebanon, South (Saida and Nabatieh), North, and Bekaa. A total of six public schools and nine private schools took part in the study. Grade 12 students from each school received the questionnaire in their classroom. As mentioned earlier, only students considering pursuing a business degree were included in

the study.In total 700 students answered the questionnaire. Only 626 were included in the analysis, however; the remaining had missing fields. After testing for outliers, 578 cases were used in the research.

Initially, a pilot test was conducted on 46 students to ensure the effectiveness of the questionnaire. The students were from the Beirut and Mount Lebanon areas, and the objective of this sample data collection was to assess the understanding of the wording used in the questionnaires. All students participating demonstrated full comprehension of the questions, both in Arabic and in English. Data collection for the full cohort started in February, 2011. An introductory letter regarding this research and the objective of the questionnaire was sent to school directors before the visit. Students were informed that the data collected would be completely anonymous. They were instructed to carefully read the scenario presented in the first page of the survey (See Appendix 1) before proceeding to the questions. Questionnaires were completed in classrooms in the presence of a school staff member—most of the time the class teacher. The estimated time taken to administer the survey—from the start of the distribution of the questionnaires to the students through the collection of their feedback—ranged from 30–45 minutes. The information gathered was subsequently analyzed using an advanced statistical software package.

Table 2: Distribution of Students Participating in the Study

Distribution of Students Participating in the Study	
Area	# of Students
Beirut	216
Mount Lebanon	94
South	177
North	32
Bekaa	59
Total	578

This table illustrates the distribution of the students participating in the study. The sampling was diversified to include students from different geographic areas. Both private and public schools were randomly selected from each of the six major provinces in Lebanon. In total 700 students answered the questionnaire. Only 626 were included in the analysis, however; the remaining had missing fields. After testing for outliers, 578 cases were used in the research.

RESULTS AND DISCUSSION

The total number of students answering the questionnaire was 700, but only 626 were included in the analysis since the remaining had missing fields. After testing for outliers, 578 cases were used in the research. As detailed above, the influence that the ten university-related factors that constitute "Institutional Characteristics" had on students' decision-making process when choosing a business school was evaluated (Table 3). The factor found to be most important was the price of tuition (mean value = 4.54). Lebanon's higher education sector is characterized by considerable diversity in its offers and prices, as different types of educational services are presented to students with varying costs. With the lack of scholarships and loans, many students are concerned with whether they can afford the fees of their desired institution, especially since their parents are their main source of funding (as discussed earlier). The second most important factor students considered when choosing their future business school was corporate image (mean value = 4.44). A higher education degree is an important element in shaping the social image of any person in the Lebanese community, as people consider it an indicator of success and social standing. In addition, this community is greatly influenced by word of mouth, and many perceive it to be crucial to join a university that is highly regarded.

The third most important factor was found to be government accreditation (mean value = 4.43). In the early 1990s, the Lebanese market witnessed the rise of various new educational institutions that were not accredited by the Lebanese government; the result was a high number of unemployed graduates since

they held non-accredited degrees. This outcome sensitized students and their parents towards the importance of government accreditation. Similarly, students appreciated the admission criteria (mean value = 4.39) required to enroll in a postsecondary educational institution. Knowing that they must work hard to enroll and that they will be joined by equally skilled colleagues enhances the image of an institution, although some experts in the higher education industry have noted that high admission criteria might scare off some students (Sabra, 2013). The institutional attributes found to be the least important to students included international network (mean value = 4.08), reputation of faculty members (mean value = 4.22), and quality of facilities and technology (mean value = 4.25). One explanation for the lack of attention students give to these factors is that they may be unaware of their importance. None of these factors was considered unimportant or neutral; their ranking was simply lower in comparison to the other factors.

Table 3: Ranking of the Institutional Characteristics' Importance

Ranking of Institutional Characteristics' Importance		
Institutional Factor	**Mean**	**Std. Deviation**
Importance of Tuition Fees	4.54	0.70
Importance of Corporate Image	4.44	0.97
Importance of Government Accreditation	4.43	0.76
Importance of Admission Criteria	4.39	0.74
Importance of Variety of Programs	4.37	0.81
Importance of Career Services	4.35	0.76
Importance of International Accreditation	4.32	0.70
Importance of Facilities and Technology	4.25	0.81
Importance of Faculty Members	4.22	0.65
Importance of International Network	4.08	0.83

This table lists the university-related factors that constitute "Institutional Characteristics" evaluated by the sample students, and the ranking of each factor's importance in the decision-making process. The factors understudy are, in order of perceived importance: the price of tuition, corporate image, government accreditation, admission criteria, variety of programs, career services, international accreditation, quality of facilities and technology, reputation of faculty members, and international network.

Students' Evaluation of ABC University's Institutional Characteristics

When asked to evaluate the attributes of ABC University (Table 4), the students ranked them in almost the exact same order as the factors they considered when choosing an institution in general. This outcome suggests that the ABC University's characteristics are included in students' decision-making process when choosing a business school, as students collectively liked all the attributes presented. The most appreciated characteristics of ABC were tuition fee prices (mean value = 4.45), followed by corporate image (mean value = 4.41), and government accreditation (mean value = 4.40). Since the suggested tuition fee was highly valued, it represents an affordable price for the majority of the students.

The fee presented was an average cost compared to the available services in Lebanon, ranging between $200 and $400 per credit. Highly priced private business schools charge an average of $13,000 per year while the public Lebanese University charges approximately $170 per year. Although students gave a fair evaluation to ABC's international networking and faculty members (mean value = 3.86 and 3.95, respectively), these factors were at the bottom of the list, as expected from the previous analysis.

Table 4: Evaluation of ABC's Institutional Characteristics

Evaluation of ABC's Institutional Characteristics		
Variable	**Mean**	**Std. Deviation**
ABC Fees	4.45	0.80
ABC Corporate Image	4.41	1.00
ABC Government Accreditation	4.4	0.79
ABC Admission Criteria	4.35	0.77
ABC Variety of Programs	4.35	0.79
ABC Career Service	4.32	0.79
ABC Facilities	4.22	0.82
ABC International Accreditation	4.09	0.88
ABC Faculty	3.95	0.77
ABC International Network	3.86	0.90

This table includes the results of student's evaluation of the ABC University introduced in the experiment. The ABC University scenario included all the main characteristics that students are expected to seek in an institution of higher education, as students collectively liked all the attributes presented.

CONCLUDING COMMENTS

This study aimed to shed light on the impact of different institutional characteristics on the decision-making process of grade 12 students deciding to enroll in a business school in Lebanon. Ten institutional characteristics were considered and assessed by surveying 578 students across the country. The data was collected from both public and private schools, and is selective to grade 12 students interested in attending a business school after graduation. The ten institutional characteristics determined to be influential in the student decision-making process, in order of perceived importance as found in this study, are: tuition fees, corporate image, local government accreditation, admissions criteria, variety of programs, career services, international accreditation, facilities, faculty reputation, and international network. Of the ten factors examined, the cost of tuition was found to be the most important to students when evaluating an institution. The example of ABC University, presented in the experiment, has average tuition fees that combine both affordability and a high perception of quality.

Second is corporate image. As mentioned earlier, education is becoming like any other product or service, where people assess the quality based on perceived image. This image is believed to affect the students' decision, possibly because employers will also value the degrees more from well-recognized institutions and offer better opportunities for graduates. Third, the Lebanese government is the main accreditor of institutions in Lebanon. Degrees not accredited by the government are not validated, and graduates are denied career opportunities in the public sector. As a result, government accreditation is a principal element in the students' decision-making process. Fourth, an institution is better able to attract students by providing moderate admission requirements that reflect the institution's selectivity without intimidating average students or portraying a forbidding competitive entry requirement.

Fifth, the workplace in Lebanon is becoming increasingly diverse, and careers are more comprehensive. Added to that, the advancement in technology has created new jobs that require more specified education. Students were found to value institutions that offer a variety of programs, and placed a strong emphasis on this factor in their decision-making process. Sixth, the literature emphasized that students are expecting a return on their investment in the form of better paying jobs and successful careers upon graduation. Providing superior career services that assist students in landing jobs upon graduation, and providing guidance and counseling on internships and different aspects of their career development, is

fundamental to students in their attitude towards an institution. Seventh, while not near the top of the list, the data revealed that international accreditation was still an important factor in students' decision-making

Eight, with the rapid development and changes in technology, it is vital for higher education to provide students with the latest technologies, the best lab facilities, and the most updated libraries. While not at the top of their list, these factors assure students that the knowledge they are receiving is up-to-date and that their chosen institution is providing them with cutting edge resources with which to acquire the skills needed to compete in the work force. Ninth, students perceive faculty members as an important factor in the model, although it is not ranked as highest in the list of factor. The reputation of the faculty members mirrors the image of the institution that they belong to; as such, students still consider it as a factor in developing their attitude towards the institution. Tenth, international networks can offer better quality education and the ability to connect with international foreign institutions. These networks, therefore, are still valued by students even if not ranked highly in this study. Finally, this research study found that these factors are all interlinked, as each one leads to or affects the other. This interconnection may explain why students included all of them in their decision-making process, even if there was a variance in the level of importance of each factor. As such, although there is a variance in the level of influence, all ten institutional factors examined in the survey—listed in order of importance in Table 3—must be considered in the marketing strategies of Lebanese business schools wishing to be competitive.

Limitations and Future Research

The timing of the study may have caused limitations as choosing a college is a process that begins with the decision to attend college and ends with enrollment. This study was conducted six months prior to students enrolling in their chosen school and major. Some may have changed their decisions after the survey was conducted. In short, this research was limited to high school students who had not finalized their decision-making process. Future research could replicate the experiment with students who had already chosen an institution in which to enroll, but before they started classes; for example, early in the month of September. This would ensure that all answers given are the final perceptions of the students, and based on actual choices. Another limitation is the number of institutional characteristics included. A number of additional institutional characteristics (such as location, size, campuses, language, religious and political affiliation, for profit and non-profit, etc.) were not included in the model. Limiting the research to the ten institutional characteristics identified in the literature as most important made it more focused. Including additional factors would have complicated the model. Future research, however, could include characteristics not introduced here. Doing so would contribute to covering all the variables that might be contributing to students' final decision regarding which school to attend.

APPENDIX

Appendix 1: Quantitative Research

Quantitative Research

The following paragraphs provide the description of a hypothetical university in Lebanon that you are considering joining next year called ABC University. Read the section below carefully, and then answer the questions that follow The ABC University was established in 1990, and is accredited by the Lebanese Ministry of Higher Education. Now, in 2011, ABC has developed five campuses in different areas of Lebanon. It has over 9,000 students enrolled and more than 500 highly qualified faculty members on staff. ABC offers undergraduate degrees in five faculties with more than 40 different majors. Entrance exams and the Lebanese Official Baccalaureate are essential for the admission process. Tuition fees vary between $200 and $400 per credit. Up-to-date laboratories with cutting-edge technology, in addition to other student activities facilities, are offered at all campuses. ABC University, as an institution for higher

learning, is a career-oriented institution helping students obtain internships during their studying period and linking them with different job opportunities at prestigious companies after graduation. The ABC University has a growing network and set of partnerships with quality higher education institutions around the world. The ABC University has acquired triple international accreditation, including the Association to Advance Collegiate Schools of Business (USA), the European Quality Improvement System, and the Association of MBA.

International Accreditation is similar to an external audit (assessment) applied to the higher education institution. It certifies (confirms) that an institution or program meets certain internationally prescribed (approved) minimum standards of excellence. Accreditation is an important value proposition, and is used in measuring the success of schools. Certifications offered by these agencies are highly valued, and used as effective marketing tools. Most prestigious business schools aim at gaining the "triple crown", which is represented by the accreditation from the three above-mentioned agencies. As of 2010, 607 member institutions hold AACSB Accreditation, 126 institutions have been awarded EQUIS, and 171 schools earned the AMBA accreditation.

Table 5: Appendix 1 Ranking Institutional Characteristics Questionnaire

For each question below, circle the answer that best fits your judgment

Ranking Institutional Characteristics

1. If you are to join the ABC University next year, how much did you like or dislike each of its following attributes

Factor	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
a. Tuition Fees	1	2	3	4	5
b. International Network	1	2	3	4	5
c. Corporate Image	1	2	3	4	5
d. Admission Criteria	1	2	3	4	5
e. Faculty Members	1	2	3	4	5
f. Facilities and Technology	1	2	3	4	5
g. Career Services	1	2	3	4	5
h. Variety of Program	1	2	3	4	5
i. Lebanese Government Accreditation	1	2	3	4	5
j. International Accreditation	1	2	3	4	5

2. I like the ABC University

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

3. I think that the ABC University is a good Higher Education Institution

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

4. I think that the ABC University is a nice Higher Education Institution

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

5. I want to enroll in the ABC University next year

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

6. Rank the importance of each of the following factors when evaluating ABC University (Circle the most suitable answer)

Factor	Not Important at all	Somewhat Unimportant	Neither unimportant nor important	Somewhat Important	Very Important
a. Tuition Fees	1	2	3	4	5
b. International Network	1	2	3	4	5
c. Corporate Image	1	2	3	4	5
d. Admission Criteria	1	2	3	4	5
e. Faculty Members	1	2	3	4	5
f. Facilities and Technology	1	2	3	4	5

g. Career Services	1	2	3	4	5
h. Variety of Program	1	2	3	4	5
i. Lebanese Government Accreditation	1	2	3	4	5
j. International Accreditation	1	2	3	4	5

7. To me, ABC University is an attractive university

a. Strongly disagree   b. Somewhat disagree   Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

Participants' Demographics

8. What is your age?

a. 16   b. 17   c. 18   d. 19   e. 20 and more

9. What is your gender?

a. Female   b. Male

10. In which area do you live?

a. Beirut   b. Mount Lebanon   c. South   d. Bekaa   e. North

11. What is your family's annual level of income?

a. < $12,000   b. $12,001 to $24,000   c. $24,001 to $48,000   d. > $48,001   e. I don't know

12. Who will pay for your higher education fees? (Circle all applicable options)

a. Parents   b. Family Member   c. Scholarship   d. Yourself   e. Others

13. What is your mother's level of education?

a. None - Some High school   b. Some College / Technical Education   c. University Graduate   d. Post graduate studies

14. What is your father's level of education?

a. None - Some High school   b. Some College / Technical Education   c. University Graduate   d. Post graduate studies

15. What is the type of high school you are enrolled in at grade 12 level?

a. Public High school   b. Gratis High school   c. Private High school

16. What is the annual tuition fee of your high school?

a. Public High school   b. Gratis High school   c. Private High school $1000 - $2000/yr.   d. Private High school $2,001 - $3,500/yr.   e. Private High school >$3,500/yr.

17. Does your high school provide higher education counseling?

a. Yes   b. Maybe   c. No

18. What is your academic achievement through this year?

a. Below Average (<10/20)   b. Average (10-12/20)   c. Good (12.1-14/20)   d. Very Good (14.1 – 16/20)   e. Excellent (16.1-20/20)

19. How important is it for you to enroll in higher education institution after graduation?

a. Not Important at all   b. Somewhat Unimportant   c. Neither unimportant or important   d. Somewhat Important   e. Very Important

20. Are you planning to join higher education directly after graduation from high school?

a. Yes   b. Not decided   c. No

21. Did you start looking for university?

a. Yes   b. Not decided   c. No

22. How much do your parents encourage you to join higher education institution?

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

23. Do your parents join in your decision on which university to enroll at?

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

24. Do your parents join in your decision on which major to join?

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

25. I know pretty much about International Accreditation

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

26. I do not feel very knowledgeable about International Accreditation

a. Strongly disagree   b. Somewhat disagree   c. Neither agree nor disagree   d. Somewhat agree   e. Strongly agree

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ACKNOWLEDGEMENT

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