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# HAVING A BALL CATCHING ON TO TEAMWORK: AN EXPERIENTIAL LEARNING APPROACH TO TEACHING THE PHASES OF GROUP DEVELOPMENT

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William Healy, William Paterson University

## ABSTRACT

*The ability to work in teams is a key critical skill that potential employers value in our graduates. In teaching about teamwork, we frequently present Tuckman's stages of group development. This experiential exercise uses the tossing of tennis balls to bring the student through the model's stages forming, storming, norming, performing in a fun and active fashion. In the debriefing, the students describe what happened. Their observations are then used to introduce and illustrate Tuckman's intuitively appealing and useful process model*

## INTRODUCTION

Employers inform us that teamwork skills are among the things that they most value in potential hires. They understand that the ability to work in teams is associated with high performance (Lyons, 2008). Although as academics we frequently give our students team projects and have them work in groups, we rarely explicitly train them to work together. One key element often overlooked is the process through which a team moves from initial formation to high performance. There are many models of group formation (Adams, 2009; also see Braaten, 1975 for a discussion of 14 models); however the most popular and recognizable is Tuckman's (1965) Stages of Group Development. Tuckman's model has four or five stages 'forming', 'storming', 'norming' and 'performing' (Tuckman, 1965) and occasionally 'adjourning' (Tuckman & Jensen, 1977). This model is intuitively appealing and easily understood, but there is a difference between intellectually understanding it and internalizing the dynamics of the model. By using an experiential approach (Kolb, 1984) it is possible to achieve a deeper level of learning and skill development (Lyons, 2008).

In this exercise we bring groups of students through Tuckman's stages of group development. They experience it and internalize it, gaining a deeper understanding of the dynamics involved than is possible from reading, lectures or discussions.

## TEAMWORK

Organizations are interested in teamwork. Teamwork skills are among the most valued skills sought by employers. In the mid 1990's there was a resurgence of interest in teamwork, and this interest has been steadily increasing. Information and communication technology and the way that it enabled changes in the nature of work causes the resurgence in interest in teamwork. As the technologies emerged, the roles of teams and teamwork in organizations evolved (DeRosa, Hantula, Kock & D'Arcy, 2004; Taborda, 1999).

The preponderance of theory building and empirical research into groups and group processes were done in the 1950s and 1960s. The field went essentially dormant in the 1970s and 1980s. The resurgence in practitioner interest in teams facilitated by changes in technology and the nature of work brought renewed interest in teams and teamwork by academics. The advantages and disadvantages of teams are well established (Nurmi, 1996). For example, groups tend to perform better than individuals when the complexity of the task is high because individuals are bounded by intellectual and information processing capabilities (March & Simon, 1958). Groups have an additional advantage because they offer a diverse pool of skills and information (Ray & Bronstein, 1995). However, we know that groups rely less on heuristics than do individuals and take more time to make decisions (Allison, 1971; March & Simon, 1958). We understand that utilizing groups bring the danger of ‘social loafing’, that is the notion that individuals may not expend as much effort in the group setting as they would have if they were working alone (Latane, 1981), but this can be avoided somewhat if participants are aware that individual effort can be identified (Latane, 1981).

The primary types of teams found in traditional organizations with command and control type hierarchies are those where the structure, the methods and procedures, and the function, goal or purpose are fixed or easily determined (Callanan, 2004; Brodbeck, 2002; Taborda, 1999). Within this area are teams with both a short-term and a long term nature. The short-term or temporary teams are formed for a specific task or time period and disband when the time period or task is completed. The long-term team stresses the more permanent nature of work teams compared to previous notions of occasional, ad hoc committees or informal groups (Paulus, 1989).

Today there is a call for self-organizing teams or ‘pockets of excellence’ even in organizations dominated by traditional command and control hierarchies (Brodbeck, 2002). Self-leading work teams are a group of interdependent, highly skilled employees responsible for directing the work that they do (Ray & Bronstein, 1995). Virtual teams are also being used more and present their own set of challenges (Mueller, 2012; DeRosa, Hantula, Kock & D’Arcy, 2004).

In the team-based organization the use of teams has been determined to be the organization's best way of developing long-term competitive advantage by utilizing its human capital (Calanan, 2004; DeMent, 1996; Barney 1991). The emphasis in team based organizations is collaboration and communication skills (Calanan, 2004) and emotional intelligence (Prati, Douglas, Ferris, Ammeter & Buckley, 2003) replacing traditional leadership.

There is a growing literature regarding team exercises and training in higher education. The literature reflects practitioner’s call for team skills (Alie, Beam & Carey, 1998). There are many subject specific exercises (ex. Bowen, 1998; Dineen, 2005) and exercises in team skills building proposed (ex. Hobson, Strupeck, Griffin, Szostek & Rominger, 2014; Dugal & Eriksen, 2004; Tonn & Milledge, 2002; Clinebell & Stecher, 2003; Clark, Blancero, Luce & Marron, 2001, Benson & Dresdow, 2000; Ettington & Camp, 2002) and a recent emphasis on service and experiential learning (Johnson, 2013; Hagan, 2012).

There are also examinations of the problems with group projects (ex. Holmer, 2001; Mennecke & Bradley, 1998; Pfaff & Huddleston, 2003). However few studies directly address the design of exercises or ways to measure (ex. Hobson, Strupeck, Griffin, Szostek & Rominger, 2014) or increase learning (ex. Galbraith & Webb, 2013; Sashittal, Jassawalla & Markulis, 2011; Bacon, Stewart & Silver, 1999; Bolton, 1999). In this article we suggest an exercise that illustrates and teaches a specific group development model. The explanation of the exercise also provides a model of an exercise modelled specifically around a developmental model, with steps of the exercise paralleling the model directly.



## TUCKMAN'S STAGES OF GROUP DEVELOPMENT

One important aspect of teamwork is the dynamic process by which teams are formed and become functional. The most highly accepted and well known model of this process is Bruce Tuckman's four stage model of small group development (Miller, 2003; Tuckman & Jensen, 1977; Tuckman, 1965). His model has been taught in practitioner seminars and university classrooms for more than three decades. The four stages forming, storming, norming and performing are shown in table 1 as described in the 2001 reprint of his classic article. The four stages were augmented by a fifth stage adjourning when Mary Ann C. Jensen observed that in the decade following the model's first introduction, the literature collectively suggested a final phase be added (Tuckman & Jensen, 1977).

<b>Table 1</b> <b>STAGES OF SMALL GROUP DEVELOPMENT</b>		
<b>Stage</b>	<b>Group Structure</b> The pattern of interpersonal relationships; the way members act and relate to	<b>Task Activity</b> The content of interaction as related to the task at hand
<b><i>Forming:</i></b> orientation,	Testing and dependence	Orientation to the task
<b><i>Norming:</i></b> resistance to Group influence	Intragroup conflict	Emotional Response to task demands
<b><i>Storming:</i></b> openness to other group	In group feeling and cohesiveness develop; new standards evolve and new roles	Open exchange of relevant interpretations; intimate, personal opinions are expressed
<b><i>Performing:</i></b> constructive action	Roles become flexible and functional; structural issues have been resolved; structure can support task performance	Interpersonal structure becomes the tool of task activities; group energy is channeled into the task; solutions can
<b><i>Adjourning*:</i></b> disengagement	Anxiety about separation and termination; sadness; feelings toward leader and	Self-evaluation

\* A later addition to the model (Tuckman & Jensen, 1977)

This model of small group development is almost always included in management principles, organizational behaviour and related textbooks. However a process model of group development should be experienced, not just read and talked about. For that reason we propose using an ‘experiential learning’ approach to learning Tuckman’s model. Experiential learning theory is a holistic model of learning defined as “the process whereby knowledge results from the combination of grasping and transforming experience” (Kolb, 1984). It has been shown to improve learning outcomes by providing students with what some scholars call “personalized education” (Waldeck, 2007). Experiential learning is rooted in hands-on practical exercises and experiences and has been shown to be particularly effective in teaching skills needed by the management students (Hobson, Strupeck, Griffin, Szostek & Rominger, 2014; Hoover, Giambatista, Sorenson, & Bommer, 2010; Devasagayam & Taran, 2009; Whetten, 2007). The following is an exercise where students experience the stages of group development

### **TEAM DEVELOPMENT EXERCISE**

#### **Materials**

Tennis balls at least equal to the number of participants, although more is preferable Floor space enough room for a 10-15 foot diameter circle per group of 5-7 students Watch any time piece that can measure 2 minutes is adequate.

#### **Preparation**

Clear floor for exercise

Form groups of 5-7 participants. Group members should ideally not know each other. It may be necessary to break up those who have worked together, had classes together and so on

Have groups stand in circles of 10-15 feet in diameter all facing in (facing each other)

#### **Round 1**

Give each group a tennis ball

Instructions: “When I say start, you are to throw the tennis ball to someone else in your group. When you throw the ball, say your own name. There are two rules about throwing. (1) You cannot throw it back to the person who threw it to you. (2) If a person next to you threw it to you, you cannot throw it to the person on your other side\*. Ok, start”

\*this prevents the ball traveling around the periphery of the circle

At the end of 2-3 minutes stop the groups.

#### **Round 2**

Still using one ball per group

Instructions: “In this round you are to throw to someone else just like last round. The two rules still apply, (1) you cannot throw it back to the person who threw it to you. (2) If a person next to you threw it to you, you cannot throw it to the person on your other side. However there is one change. This time you must say the name of the person that you are throwing it to. OK, start”

At the end of 2-3 minutes stop the groups.

### **Round 3**

Instructions: "In this round you no longer need to call out a name. The other two rules still apply. (1) You cannot throw it back to the person who threw it to you. (2) If a person next to you threw it to you, you cannot throw it to the person on your other side. However, there is one difference. (Throw the team another ball) You need to keep two balls in the air. Ok, start."  
At the end of 2-3 minutes stop the groups.

### **Round 4**

Instructions: "You guessed it. (Throw each team another ball) Three balls Ok, start" At the end of 2-3 minutes stops the groups.

### **Round 5**

Instructions: "Now practice for a while"  
Give team's a fourth or even more tennis balls if they seem to have mastered the task. At the end of 4-5 minutes stop the groups.

### **Round 6**

Instructions: "Now let's clear the floor and let each team show us what they can do" when class scatters to the periphery and one team is in the center "OK, start"  
At the end of a few minutes stop the team and move on to the next team. Continue until each team has a chance.  
After each team had a chance, ask "Which team did the best?"

### **Round 7**

Have the 'best team' go back in the center.  
Tell them to start, and then increase the number of balls. If possible, have them do the same number balls as members.

### **Debriefing**

Ask the participants to relay their observations. It is best to go through sequentially, asking about Round 1, then Round 2 and so on.  
The comments can be written on a board or flip chart.  
After some discussion, the facilitator should then present Tuckman's model  
Ask participants how their experience maps directly onto the model.

## **DISCUSSION**

By the end of the exercise, participants have experiences all of the stages of group development. During the debriefing they should have identified experiences that correspond to the patterns of interpersonal relationships that correspond to the group structure development and the content of interaction as related to the task at hand. With a minimum of editing and leading the facilitator should be able to provide an amazing experience by eliciting comments that map directly onto the stages of group development.

The preparation, Round 1 and Round 2 correspond to the 'forming' stage. The group gets to know each other and begins to interact. They follow the initial instructions (forming a circle) and then begin to learn the general task. The 'rules' are fairly clear but not everyone in the group will understand them immediately, therefore it is necessary for group members to interact outside of the task to explain the rules. Group members will correct each other as rules are broken (i.e. the ball is tossed back to the person who tossed it to the participant). There may be some disagreement as to the meaning of the rules as stated.

Round 3 and Round 4 are the 'storming' stage. The rules are a little more complex and accomplishing the task becomes more difficult as more balls are introduced. There will be some conflict as participants are proposing different approaches to accomplish the tasks. There will also be frustration when the balls are dropped, participants do not follow proposed strategies and other groups are observed apparently outperforming their group. Rarely has there been excessive anger or arguing at this stage, but groups often have some minor arguing and exhibit impatience and annoyance. Participants also take different roles upon themselves problem solver, leader, peacemaker, and so on. A discussion of these roles and how they emerged can add additional insight into the process.

By Round 5 the group has entered the 'norming' phase where the methods used are decided and are being fine tuned and the group is developing the skills and abilities that can only occur when the group is in agreement. By then, several patterns have probably evolved and some techniques for throwing and catching have been adopted. Cohesiveness and a team identity emerge, and emotions turn from negative (frustration, annoyance) to positive (accomplishment, fun). The interactions within the group are friendlier and the tones of interactions change.

Round 6 and 7 correspond to 'performing'. By that point, the group has practiced and is competent in performing the task. The task is fun at this point and teams that were once frustrated at the increasing complexity of the game when 2 or 3 balls were introduced, now are challenging themselves and asking for as many balls as they can handle. Frequently groups have succeeded in tossing as many balls as there are group members. It is really impressive to see a group of seven students keeping seven balls in the air.

Adjourning from the exercise is not characterized by the sadness and negative emotions described by the adjourning stage. That is because they will see each other in class many more times, they understand it is a one-off class exercise and it was a fun but trivial task. However they can easily understand that if the process was more extensive, the dissolution of the team could trigger stronger emotions. At this point students relay other experiences where they were separated from a team or group after an extended time (sports teams, schools, etc.). The experience can be finished by giving the participants a questionnaire to evaluate the stages of group development (Mueller, 2012; Miller, 2003).

## SUMMARY

In the above exercise, participants discover and experience first and the stages of group development. By going through the process and reflecting upon it before the established models (Tuckman, 1965; Tuckman & Jensen, 1977) are presented, the participant has a deeper understanding and appreciation for the components and dynamics of the model. It is a simple approach, which takes a minimum amount of time, almost no resources (the room and some tennis balls) and is easy to facilitate.

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# WHAT'S THE DIFFERENCE? PRINCIPAL PRACTICES THAT SUPPORT THE ACHIEVEMENT OF LOW-INCOME STUDENTS IN DEMOGRAPHICALLY DIVERSE SCHOOLS

Goly Brown III, Auburn University of Montgomery

## ABSTRACT

*Low-income students continue to be disproportionately represented among students who are below grade level in reading and math. This study addresses the following research questions: What supports did the elementary principals in the two investigated high-achieving schools implement? Did the supports differ in the high-achieving low-income school? Two elementary principals within the same district were investigated in this study. Both principals successfully raised student achievement in their schools. One was the principal of an affluent school, and the other was the principal of a school where the majority of the students were from low-income households. Data were collected using qualitative methods such as interviews and document analysis in this cross-case analysis study to find out what support provided by these principals contributed to their schools' success.*

## INTRODUCTION

As part of the recent accountability movement, which started with the enactment of No Child Left Behind legislation in 2001, most schools have federal and state mandates to close the achievement gap, between low-income students and more affluent students. Research on school leadership shows a strong correlation between school leaders and student achievement (Dumay, Boonen, & Van Damme, 2013; Kelley & Shaw, 2009; Marzano, Water, & McNulty, 2005). Leithwood, Louis, Anderson, and Wahlstrom (2004) claim that school leadership is second only to classroom instruction among all school related factors that contribute to what students learn. This study looks to answer two questions: What supports did the elementary principals in two high-achieving schools provide? Did these supports differ in the high-achieving low-income school? The schools in the study are demographically different: one school has a student population that is primarily high income, and one school is attended by mostly low-income students. Both schools increased student achievement based on state assessment data during the tenure of the principals. The names used in the study are Mary Thomas, the Principal of Monroe Elementary School, which has a student population that is primarily high income, and Gene Stillman, the principal of Gibson Elementary, which is attended by mostly low-income students. Both schools have significantly raised student achievement. Gene led her school to Blue Ribbon School status. The National Blue Ribbon Schools Program recognizes public and private elementary, middle, and high schools where students perform at very high levels or where significant improvements are made in students' academic achievement.

## METHODOLOGY

This study is a qualitative, cross-case analysis. Interviews and document analysis were used to collect data. Three one-hour interviews were conducted with both principals. One-hour interviews were conducted with 6 teachers in each building. One-hour interviews were conducted

with two district office administrators, totalling 20 hours of interview data. Documents such as building plans, parent organization agendas, and Title 1 plans were evaluated. Recorded findings were triangulated. Pseudonyms were used to protect the identity of the cases used in the study.

Both of the schools are elementary schools and are within the same school district. Two schools in the same district were sought out to help clearly identify other variables that may have affected student achievement success (teachers, district programs, community initiatives, etc.) and clearly report data to answer the research questions: What supports did the elementary principals in these high-achieving schools implement to increase student achievement? Did these supports differ in the high-achieving low-income schools?

### **Conceptual Framework**

The conceptual framework for this study comes from chapter six of Bransford, Brown, Cocking, Donovan, and Pellegrino's (2000) book entitled *How People Learn: Brain, Mind, Experience, and School*. They discuss a Perspective on Learning Environment framework, which identifies four general perspectives of quality learning environments and emphasizes that they need to be conceptualized as a system of interconnected components that mutually support one another (p. 133). These perspectives on learning are (1) learner centered, (2) knowledge centered, (3) assessment centered, and (4) community centered.

#### **Learner Centered**

For a learning environment to be learner centered, the educator must pay attention to the "knowledge, skills, attitudes, and beliefs that learners bring to the educational setting" (Bransford et al., 2000). If knowledge is continually delivered without any thought to the learners, it is unlikely that any real learning will occur. According to the model, it is critical that educators keep their learners in mind when planning lessons. Included in this teaching is "diagnostic teaching" (Bell, O'Brien, & Shiu, 1980).

Diagnostic teaching attempts to discover what students think in relation to the problems at hand, discusses students' misconceptions sensitively and gives them situations to continue thinking about, which will enable them to read just their ideas. Learner-centered teachers also respect the language practices of their students because they provide a basis for further learning. Bransford et al. (2000) say that teachers who are learner centered recognize the importance of building on the conceptual and cultural knowledge that students bring with them to the classroom. If teaching is conceived as constructing a bridge between the subject matter and the students, then learner-centered teachers keep a constant eye on both ends of the bridge. The teachers attempt to get a sense of what students know and can do as well as their interests and passions.

#### **Knowledge Centered**

According to the PLE model of a learning environment, knowledge-centered environments emphasize the importance of students understanding knowledge as opposed to simply memorizing a set of facts. In a knowledge-centered environment, students can transfer knowledge to new learning situations. When teaching students, it is important to take into account the prior knowledge that students bring with them. This approach helps students formulate new knowledge and make sense of what they are learning. The most important part of the knowledge component is that educators ensure that students are truly understanding information and not merely memorizing it (Bransford et al., 2000). Environments that are solely learner-centered would not necessarily help students acquire the knowledge and skills necessary to function effectively in society. Knowledge-

centered environments take seriously the need to help students become knowledgeable by helping them learn in ways that lead to understanding and subsequent transfer.

Knowledge-centered environments intersect with learner-centered environments when instruction begins with a concern for students' initial preconceptions about the subject matter. Without carefully considering the knowledge that students bring to the learning situation, it is difficult to predict what they will understand about new information that is presented to them.

### **Assessment Centered**

The third component of the PLE model is that the learning environment must be assessment centered. There are two types of assessment: formative assessment, which is administered and used to improve teaching and learning, and summative assessment, which is used to measure what students have learned at the end of the designated learning period (Bransford et al., 2000). Summative assessments are what most people think of when assessment is mentioned; they can assure accountability and may even help teachers modify their teaching strategies. However, one might argue that formative assessments are more beneficial. Formative assessments allow students to receive feedback in a more informative and timely manner. Furthermore, teachers are better able to adjust their instruction for students who have difficulty understanding the concepts (Bransford et al., 2000). Assessing the achievement of learning goals is critical. Assessments should be "predictive of students' performance in everyday settings once they leave the classroom" (Bransford et al., 2000, p. 141). Assessments that are designed to measure students' ability to simply recall memorized information do not necessarily assess knowledge transfer, which is critically important in learning situations. Proper assessments must measure students' ability to take knowledge that has been acquired in the classroom and, in turn, apply it to a new situation.

### **Community Centered**

The final component of the PLE theory is that the learning environment is community centered that is, it focuses on the social nature of learning, including the norms and modes of operation of any community. Research shows that learning can be increased by social norms that value striving for understanding and making mistakes (Bransford et al., 2000). In a constructivist classroom, for example, students are encouraged to share their ideas with one another to learn from different ways of thinking. Students who feel safe to make a mistake (because the norm is learning from mistakes) are more likely to feel comfortable sharing. It is also important to bear in mind that teachers can formulate detrimental norms if they are not careful, for instance, if they have low or different expectations for certain groups of children (Bransford et al., 2000). Norms must be consistent.

It is important to reiterate that although these components of the PLE framework are discussed separately, the research findings from Bransford et al. (2000) show that the four perspectives are aligned in ways that mutually support one another. For example, data-driven instruction would combine setting up a classroom community, or community centered techniques, as well as assessment-centered, learner-centered and knowledge-centered techniques. Without this alignment, it is difficult to know what is being learned or what needs to be planned for students. The research also notes that there is no recipe for designing effective learning environments, but it does support the value of asking certain kinds of questions about the design of learning environments through these four perspectives (Bransford et al., 2000, p. 133). The degree to which schools and classrooms are learner centered, knowledge centered, assessment centered, and community centered is an important consideration in designing these environments.

The four components of an effective learning environment described in Bransford et al.'s (2000) *How People Learn* provided a conceptual foundation for this study. While collecting and analyzing data, I used the PLE components as the guiding framework. Two elementary school principals from demographically different schools serve as case studies. I asked the principals about the support they have provided in their respective schools to raise the achievement of their students. Interview data collected from the principals as well as data from school documents such as meeting agendas, site plans, and newsletters were analyzed using qualitative methods in accordance with the PLE model. While the four tenets of the PLE model do not directly align with the characteristics of effective school leadership previously identified in the literature, they do reflect the categories in which a school leader helps provide support to increase student achievement. The tenets of PLE are used to analyze the data to provide a context for my research question. I briefly discuss the support elementary principals provide that is related to the PLE model in the context of support that is provided to increase the achievement of students in their buildings.

<b>TABLE 1</b> <b>ELEMENTARY PRINCIPAL SUPPORT IDENTIFIED FROM THE DATA ACCORDING TO THE TENETS OF THE PERSPECTIVES ON LEARNING ENVIRONMENT MODEL</b>	
Tenets of the Perspective on Learning	Elementary Principal Support Identified from
Environment Model	the data
Learner Centered	
Knowledge Centered	
Assessment Centered	
Community Centered	
Other	

Table 1 shows how the data fit into the PLE categories and records the support that the elementary principals provided to increase the achievement of low-income students. Data found outside of the framework will be recorded as other.

### DISTRICT CONTEXT

Both Monroe and Gibson Elementary Schools are in the Beaumont School District, which serves just over 7,000 students. The town of Beaumont has a population of 40,000. At the time of this case study, it had twelve elementary schools serving students in grades kindergarten through fifth grade, two middle schools serving students in grades sixth through eighth grade, and one comprehensive high school. The Beaumont School District has seen shifts in the socioeconomic status of students and families. In 2001, 43% of the students were eligible to receive free/reduced price lunches, and in 2013-2014, 78% of the students were eligible to receive free/reduced price lunches district-wide. Monroe Elementary Schools students identified as low-income over the last six years ranged in between 10% to 15%. Gibson Elementary School was 65% low-income in year 1 and 78% low-income in year 6. It had a steady increase over the six years.

<b>TABLE 2</b> <b>PERCENTAGES OF LOW-INCOME STUDENTS AT MONROE ELEMENTARY SCHOOL AND GIBSON ELEMENTARY SCHOOL</b>		
<b>Year</b>	<b>Monroe Elementary</b>	<b>Gibson Elementary</b>
1	10	65
2	13	68
3	12	71
4	11	72
5	14	76
6	15	78

Monroe Elementary School has had positive student achievement over the six years of data examined in this study. Table 3 shows that reading achievement measured by the state assessment remained between 86 and 96 percent. Math achievement ranged between 60 and 95 percent. In the first year, the dip was credited to a new math program implemented in the district. A steady increase occurred after that year.

<b>Table 3</b> <b>PERCENTAGES OF READING AND MATH PROFICIENCY FOR ALL STUDENTS AT MONROE ELEMENTARY SCHOOL</b>		
<b>Year</b>	<b>Reading</b>	<b>Math</b>
1	86	60
2	93	72
3	89.7	82.8
4	93	80.9
5	86	90
6	96.7	95

Table 4 below shows the percentages for students proficient in reading at Gibson Elementary School. After year one, there is not much of an achievement gap between the low-income students and the more affluent students. Reading achievement and growth tend to be positive. Scores range from 84 to 93 percent school-wide and 80 to 92 percent among low-income students in reading with steady growth occurring each year in both categories.

<b>TABLE 4</b> <b>PERCENTAGES OF READING PROFICIENCY FOR ALL STUDENTS AND FOR LOW-INCOME STUDENTS AT GIBSON ELEMENTARY SCHOOL</b>		
Year	All Students Proficient in Reading	All Students Proficient in Math
1	84	80
2	86	85
3	90	90
4	91	88
5	92	90
6	93	92

Table 5 shows the percentages of students proficient in math at Gibson Elementary School. Scores ranged from 69 to 93 percent school wide and 63 to 93 percent among low-income students. Scores were low in the early years due to the implementation of a district-wide math program. The gap between low-income and affluent students was relatively closed the last 3 years. The last school year the data showed that low-income students outperformed the more affluent at Gibson in math.

<b>TABLE 5</b> <b>PERCENTAGES OF MATH PROFICIENCY FOR ALL STUDENTS AND FOR LOW-INCOME STUDENTS AT GIBSON ELEMENTARY SCHOOL</b>		
Year	All students who are proficient in math	Low-income students who are proficient in math
1	69	63
2	84	75
3	84	78
4	93	86
5	88	86
6	88	92

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## MARY'S PROVIDED SUPPORT

Mary is a true facilitator of communication and collaboration. When asked what advice she would give to any new principal, she stated: As a principal, I believe the most important thing that you need to do is to establish a common vision with your staff to nurture an environment that everyone can support and believe in, and to establish very healthy working relationships with your staff make your staff know that they are a vital part of the whole academic process and you look to their expertise and respect their expertise and rely on them to be strong team players.

Mary realizes also that this is a challenge for her and for every principal to reach every person on a level where they all feel valued. "We are all different, we all have strengths, we all have differences, we are a very diverse society, and we all bring something to the table that can help benefit other people."

Mary's warm, calm, genuine demeanor makes every visitor to her school feel more than welcome. While many administrators' offices have an executive feel, with the desk prominently placed, Mary's desk faces a wall. The focal point of her office is a small table and chair where she meets with students, families, and teachers. In addition, her office is personally decorated with wallpaper, and the school radiates a warm, homey feeling evident by a handmade quilt hanging in the hallway, noticed by everyone who enters through the main doors. Other decorations are on display throughout the building, giving the school a unique, welcoming charm. As one third grade teacher stated, "All families feel welcome not only by her genuine care but by the physical environment she's created, as well."

Reflecting on her experiences prior to becoming a principal, Mary mentioned that the most important thing she learned was that all the resources at her disposal need to be working together comprehensively to do what is best for the children. When Mary was asked about what type of support she provided to raise student achievement, this belief in coordinating resources shined through as something she puts into practice.

Mary's biggest strength is utilizing all her resources in a comprehensive way with the ultimate goal of student achievement. The data revealed five types of support that Mary provides to increase student achievement: (1) establishing a positive school community with professional learning communities in mind; (2) creating an efficient schedule with protected math and reading blocks; (3) budgeting with professional development in mind; and (4) making student achievement data drive instructional decision making and interventions.

### **Establish a Positive School Community with Professional Learning Communities**

In describing Monroe Elementary's school culture, the executive director of student achievement for the Beaumont School District had this to say about Mary: I can't think of anybody I have ever known in this district that could do the political piece as well as Mary. She is wonderful with parents, and with her special education training she has the perfect calming demeanor, and she uses a persistent, soft-spoken voice, calmly moving the agenda along and moving the Monroe School community forward. She has a natural gift and is a perfect fit for that school and its family demographic.

A third-grade teacher agreed: "Our culture is positive driven by Mary's positive attitude; every morning she makes an announcement and shares a guidance phrase and recognizes student accomplishments." Another teacher commented, "The principal welcomes family and community members into school she is able to discuss touchy topics with parents using tact as well." Mary believes, We are extremely fortunate to have students of all socioeconomic bases, extremely multiracial in nature, and what makes that so beneficial is that we tend to have appropriate proportions so we are able to group students in a heterogeneous way evenly and maintain high

expectations for all students.

Mary has implemented three features at Monroe Elementary School that allow for this positive community: a school-wide program called TRIBES, parent involvement, and professional learning communities (PLCs).

TRIBES is a process that allows for a common philosophy of how all teachers teach and promote learning in their classrooms. "I definitely consider Monroe a TRIBES community over the last 12 years, which truly promotes a positive learning community," Mary stated. The environment is highly cooperative in nature; it is highly collaborative not only on a professional level but also on a student level, and TRIBES works according to four agreements: mutual respect, no put-downs, attentive listening, and the right to pass. Mary, over her tenure at Monroe Elementary School, has tried to incorporate these agreements into everything that the staff does and says. "The TRIBES agreements serve as a framework for a behavior management plan and school-wide expectations it's a great tool that can be used to communicate those expectations to teachers, students, and parents."

A kindergarten teacher noted, "We currently teach TRIBES to our students from kindergarten on, they know these expectations." A third-grade teacher added, "Mary starts every semester with a K-2 and 3-5 assembly about the TRIBES agreements and the high expectations for creating a learning environment it is awesome, it should be taped and shown in every school TRIBES is consistent and constant in every room." Many schools have programs like this on paper, but a strong implementation of the program at Monroe is what makes it work, and this was accomplished through the principal's commitment to the program. Mary stated: It was important initially to make teachers aware TRIBES is a process, not an activity or isolated circle. It's something that you integrate and make relevant to what you are teaching, and that's a stretch for a new teacher to grasp. They look at it many times as a touchy-feely type of program and until you work it and truly understand how you teach, how to connect it to kids, and the way they interact with other kids, how you deliver a lesson plan, introduce activities, and carry those activities out.

Mary lives this process and makes sure her staff is equipped to as well. All teachers go through an intense, two-day training, and Mary feels that it is extremely important to support TRIBES initiatives and TRIBES professional development training on a routine basis. Even after district budget cuts and a change in the district office moved away from supporting TRIBES district wide, Mary creatively budgets money and plans training sessions to make sure that all staff participate in this training and are able to implement the program. The most notable statistic is the suspension data. The 12 elementary schools in the Beaumont School District average 17 suspensions per year, but Monroe Elementary averages 5 and last year did not have any. A well-behaved student body allows for a positive community where kids feel safe and the focus is on learning rather than discipline and conflict management.

In addition, a positive school community at Monroe Elementary is developed through a strategic way of involving parents into the school community. As Mary states: Our site-level team that we have on a district scale promotes that parents be actively serving on the team. PTO [parent-teacher organization] becomes a very important part of that site-level team component, and what we've done is that we make sure we align our goals within site level with the same goals we're working within our PTO so we are talking the same language.

There are many ways in which parents can be and are actively involved with their children's educational experience. As one specialist teacher noted, "Mary encourages parents to lead after-school extracurricular activities where they can share their expertise. In addition, she promotes school-wide activities fall, winter, spring festivals, talent shows, and all-school sings." In addition, parents are educated on proficiency levels, and information about how student growth and achievement are measured is provided through evening workshops at Monroe Elementary School.

Reading specialists conduct reading workshops throughout the year, and once a month the school



hosts a parent event, usually a festival-type night, to build a sense of community. Mary stated, "Overall we get a wonderful turnout for our events, but we keep it within the school plan, so everyone knows how these things fit into the overall education of their child."

While TRIBES drives the school atmosphere to operate with a positive school culture in regard to behavior expectations, professional learning community procedures drive the way teachers interact in regard to student achievement. A professional learning community is made up of team members who regularly collaborate toward continued improvement in meeting learner needs through a shared curricular-focused vision. Facilitating this effort are (1) supportive leadership and structural conditions; (2) collective challenging, questioning, and reflecting on team-designed lessons; and (3) instructional practices/experiences and team decisions on essential learning outcomes and intervention/enrichment activities based on results of common formative student assessments (Bolam, McMahon, Stoll, Thomas, & Wallace, 2005).

**A fifth-grade teacher noted:**

Our school has done PLCs or worked year to year to implement the procedure for quite some time. Collaboration between teachers, specialists, and aides is vital using assessment data in meetings to come up with a way to raise student achievement has always been a focus here.

The two most notable actions that Mary implements in regard to professional learning communities at Monroe Elementary School are time and monitoring.

**Mary stated:**

It is extremely important that we know what their [the teachers'] agenda is...what instruction is driving through student data, and the time that we meet is so precious and critical that it has to be a real structured focus. Teachers do look at the data at that time; they are gathering expertise from other teachers on what best practice strategies can be addressed and what appropriate interventions of teaching techniques can be done to support these children with needs.

Mary makes every effort to attend these weekly grade-level meetings, or she makes sure she is a part of the conversations about these meetings with her staff to ensure that the weekly PLC meetings are meaningful and productive.

**As one kinder garden teacher noted:**

Mary constantly checks in with us regarding our PLC meetings and helps make them meaningful to our teaching practice; she reviews our meeting goals and gives helpful feedback. Data drives our instruction, which we focus on through a student-centered environment.

Mary prides herself on being a facilitator of collaboration. She has built a positive school culture through TRIBES, parent involvement, and professional learning communities. These three components comprise a systematically developed management plan that Mary can maintain and then move into an instructional leader role. Student data show that Monroe Elementary School has very few suspensions. Though it is not conclusive that the low suspension rate is a direct result of the TRIBES program, the infrequency of negative behavior does positively affect the school community by limiting the amount of time teachers and administrators have to spend handling negative student behavior. In addition, parent involvement is seen as an open, positive relationship between parents and the school. Parental involvement is not viewed as a separate entity; it is viewed as part of the school process. This collaborative environment creates a positive rapport with parents and gives them a positive feeling about their child's school. The implementation of professional learning communities puts teachers and administrators on the same page about how to look at student achievement data and develop plans to raise student achievement. Teachers, through

these meetings, all speak the same language and all report student achievement data the same way.

## **Scheduling**

“If I gave you ten great ideas regarding things you could do tomorrow but it took you 30 hours to do them, some things wouldn’t get done. Not that they are bad ideas, but it’s impossible to do them all in a day.” A superintendent told me this one time when talking about scheduling. Good administrators need to know how to establish a schedule that identifies and prioritizes the necessary tasks and activities and puts people in a position to execute them to increase student achievement. When scheduling at an elementary school, the specialist schedule is the key component in establishing core curriculum blocks. Many districts do this differently; some work through the district office for scheduling, and some like the Beaumont School District rely on the principals. The more specialist teachers (music, gym, and art) who can be hired the easier it is to schedule. In Beaumont, a lower-income district with limited financial resources available, scheduling can be a challenge, and, at times, specialist teachers are split between three buildings. Principals are challenged to establish a schedule that aligns with curricular goals and stays within the contractual regulations, which means making sure specialist sections are within the contractual limit. Teachers have common planning time at each grade level, and instructional times in math and reading are equal at each grade level. Mary has been able to meet these scheduling challenges. In fact, many other principals in the district call on Mary for her scheduling expertise. She is able to establish common core subject blocks of uninterrupted time by grade level, hold progress-monitoring meetings every five weeks, and have weekly grade-level meetings within the PLC framework. As a fourth grade teacher stated when asked what support Mary has provided to increase student achievement:

Time, time, time she has established a schedule that gives us time for collaboration, data analysis, professional learning communities, and grade-level meetings. She is extremely cognizant of establishing an efficient schedule for us, and somehow she is able to do this year after year.

Teachers at Monroe Elementary School expressed that there are so many initiatives that are given from the district that a proper schedule is necessary from their principal to implement the district directives. A kindergarten teacher noted, “Mary creates time blocks for guided reading and math instruction at every grade level so that students get instruction uninterrupted in those core areas.” This is important for interventions such as working with a literacy specialist or resource teachers. All of the courses must be aligned to create a comprehensive literacy plan. Elementary teachers have many interruptions during the day, as described by this fifth grade teacher:

Daily, we have a specialist [art, music, gym, or library], we have resource teachers coming in to meet IEP [individualized educational programming] minutes periodically, possibly our school psychologist, for testing, or character education etc. assemblies and many other distractions throughout the school year. In between time, we teach our core subjects. Mary is excellent at putting all of those things together so that we can meet these things efficiently and effectively.

Mary’s scheduling ability has allowed her staff to buy in to her vision for the school, because it demonstrates her commitment to devoting the necessary time and resources to implement and execute these initiatives. Not only is there time to do these things, but the schedule shows that Mary is attempting to do everything in her power to make it work and to put the teachers in situations where they can be successful. As Mary stated: Scheduling is something I have worked on over the years to perfect it goes a long way towards establishing a school vision and making your staff feel that your district expectations are doable. In addition, it puts together a comprehensive framework for a building plan as it relates how student achievement will be increased.

Teachers admire, respect, and appreciate the way Mary schedules. A fifth grade teacher noted:

Regular weekly grade-level meetings, common prep times, literacy meetings, progress monitoring meetings, and protected math and reading blocks are something we can look forward to start each year. This gives us confidence that a schedule is in place to support our efforts to meet the high expectations our building has.

The schedule at Monroe Elementary School really is the frame work for Mary's vision and has been a huge selling tool for her expectations to her staff about the school's priorities. Mary's ability to prioritize and focus on what is considered important throughout the school day is something that the teachers appreciate. The schedule lets the teachers know that their classroom time, meeting time, and professional development time are valued and that they are a high priority of the principal. Teachers feel that the expectations and demands from Mary and the district can be met because there is a schedule in place that supports their efforts.

### **Budgeting and professional development**

Elementary schools tend to receive a small building budget compared to other district operations. Some districts strictly run the budget from the district office. In the Beaumont School District, buildings are given a budget annually of between \$25,000 and \$30,000. More than half of that money goes to copy costs, paper, and supervision expenses. The rest is used for other supplies. This is because the other schools in the district have higher needs or have more low-income students. The average family income of students at Monroe Elementary School is higher than it is at other elementary schools in the district. With a limited budget, Mary has had to come up with creative ways to fund programs. For raising student achievement, the most important initiative she funds is professional development for the teachers and staff.

### **Mary stated:**

Budgetary restraints sometimes hinder how much professional development we can do outside the school. It is my job to find creative ways to do so. In order to free money up, I negotiated with my staff to pick up recess duty, which gives us \$8,000 more per year since I don't have to pay someone \$8 an hour for recess duty. In exchange for their service they get to use flex time, and then we use that money for professional development, so teachers are either steered by me or can actively pursue and request these professional development opportunities that fit within the school's vision. This was a creative way for the school to fund its professional development needs.

Mary's creativity and willingness to sell the idea to teachers made it possible. However, part of the agreement was her willingness to help out with supervision at specific places and times as well. This can be challenging to an administrator with her schedule, because unpredictable events tend to happen during the school day. However, she stated: It's for the good of the order. They bought into the idea, so I feel I need to hold up to my end of the bargain, and I feel we have the best professional situation possible because of it. Granted, it could always be better based on money and all of our continued learning, but we are doing the best with what we got.

Teachers support Mary's handling of the school budget. A fourth grade teacher noted, "Mary advocates for teachers' needs, professional development, resources, and time. We rest assured that Mary has our best interest at heart as long as our interest is student achievement."

Mary budgets money for substitute teachers to come in so that teachers can attend monthly collaborative progress monitoring meetings, where assessment data are reviewed and intervention strategies for students who are behind are discussed. Most buildings use Title I money for this and

have double the money that Monroe has. However, Mary has been able to make sure teachers have the time for these important meetings by being creative with the budget. A third grade teacher noted:

Monthly collaborative progress monitoring meetings have been very effective. Mary supplies subs for this valuable time out of our building budget. Meeting with all instructors and discussing data and strategies every five weeks has been very helpful in establishing specific interventions.

In her first year, when Mary was moving forward with new initiatives, she always tried to incorporate professional development as a key forum to support collaborative efforts. Mary believes that:

The key is that professional development continually be emphasized and integrated into everything that we do. It's really the key to drive achievement forward. That is why I put such an emphasis on making sure money is readily available. It's also important to engage teachers in the process, to empower teachers, to actively involve them in a customized professional development plan, to get them to buy in, and actually take leadership roles. Getting that buy-in, empowering them, engaging them, respecting their expertise, and actively bringing them forward in leadership roles, recognizing leadership qualities in each and every person on your team is critical.

Mary is a collaborator at heart, and she applies this talent to all aspects of her building, including professional development. Getting to know her staff, their strengths and weaknesses, and building on the strengths and allowing teachers who are strong in one area to help those who are weak is the way Mary approaches professional development.

We have a lot of expertise in the building to tap into; I don't go outside of the building for training if I don't have to. Teachers respect people in the building who are doing things with the same demographic of students that they are teaching. In other words, if it works across the hall, it can work in my room. To accomplish these professional development initiatives at Monroe Elementary School, a site improvement plan team meets on the first Wednesday of each month to customize the school's goals in alignment with the district's strategic goals. The team specifically addresses the topics of increased professional development for all staff. The third Wednesday of each month is used for professional development purposes. "Our plan is to actually conduct professional development for our building that is specific to our building needs," Mary stated. Common prep times are scheduled and used to speak about curriculum strategies once a week.

Mary's ability to budget creatively makes it possible to achieve the large-scale vision of the school. Her management skills are evident in her ability to creatively budget for her school's professional development needs on a limited building budget and pay for other resources, copies, and supplies. Utilizing these management skills to make managing the building efficient and to free up time to be an instructional leader is a key to her success as a principal.

### **Student Achievement Data Drive Instructional Decision Making and Interventions**

The Beaumont School District developed a Beaumont Balanced Literacy Program and a Math Investigations Program. These district-wide initiatives were established by the executive director of student achievement and the superintendent. When asked how much the program contributed to student achievement increases at Monroe Elementary and how much the student achievement was attributable to the principal's instructional leadership, the executive director of student achievement stated, "It was about 50-50 at Monroe." She went on to add:

The superintendent and I would go from building to building to meet with every principal to see where they were as far as a big picture was concerned. It was interesting as all twelve elementary schools had a different way of implementing based on principal expertise. Mary's strength was taking the district curriculum initiatives and tailoring it to her demographic of students

and their needs. She had an exceptional way of identifying the strengths of her staff and empowering them to be teacher leaders. In addition, looking at data and coming up with intervention strategies was a big part of her school's success, and she really did well with that over time.

As in most districts, the curriculum framework at Monroe Elementary comes from the district office. However, using data curriculum tools was a key to Mary's success in leading Monroe Elementary school toward positive student achievement results. Two teams look at the data at Monroe Elementary School: a site improvement team and a progress monitoring team. The site improvement team meets on the first Wednesday of every month to customize goals from the district's strategic goals.

The team looks at the data and determines the professional development needs for all staff. Professional development for the entire staff is presented on the second and third Wednesday of every month. Mary stated, "The number one goal of these meetings is to look at the data and to plan quality professional development experiences for our building, specific to our building needs." One example taken from an agenda for these meetings is that a unit on money was identified at a site-level meeting as an area where students were struggling at a grade level based on the previous assessment. At the next two Wednesday meetings, a plan was established on how to move forward with the curriculum pace, but teachers at the specific grade level were to plan to review this concept periodically. Teachers with a high number of students who met the proficient or advanced level shared strategies they used in teaching that specific unit. These successful strategies were compared with the strategies used by teachers whose students performed at a lower level on the unit assessment.

### **Future lessons were developed to improve student performance.**

The progress monitoring team meets every five weeks, and the focus is specifically on reading, writing, and math progress data for all students. Each teacher brings common assessment data outcomes to these meetings. Mary has provided each teacher with a common assessment grid that allows the teachers to report data uniformly. Before the meetings, teachers have already identified the skill-based needs for each student. Mary pointed out that "this saves time, so when the teachers come to the meetings we use the data to drive the appropriate necessary intervention for each child and draw on the expertise from within the group." Mary added:

This process has really had a huge impact as we have fine-tuned it over the last three years. We went from everyone bringing in raw data and arguing over what is proficient to establishing those common assessments and pacing guides. This has allowed us to cut through the philosophical debates among adults that initially took up so much meeting time and to focus on the needs of the student.

From these meetings, teachers come up with interventions or differentiated instruction strategies to meet the needs of students performing below the benchmark standards. Some of these interventions include more guided reading group time with a literacy specialist, an extra guided math group, and math computer interventions. Mary has developed this system of identification in her building within the district framework.

Data-driven instruction and a systematic structure that gives teachers the opportunity to make data-driven decisions about their students have been key to Monroe Elementary's success. Being data-driven as a leader was how Mary was able to implement this process within her building, and this idea has trickled through to her staff. In looking at documents from meetings and talking to teachers and the principal, it is clear that data is the focus of everything from parent involvement to student achievement. Decisions are not made in any category, especially as it relates to instruction, if they are not based on data.

## **GENE'S PROVIDED SUPPORT**

Gene Stillman, the principal of Gibson Elementary, has a personality that is energetic, upbeat, and outgoing. She also has a down-to-earth, practical side that shows through when she is speaking with her noticeable southern accent, which adds charm to her direct, straightforward persona. This combination of enthusiasm and frankness makes people feel comfortable talking to her and makes it easy to understand where she stands in regard to education: She has an unwavering belief that all children can learn. The executive director of student achievement of the Beaumont School District who hired Gene stated, "It was her personality and 20 plus years of experience in the classroom that have made her successful at Gibson Elementary School. She was an excellent fit." Gene's office is small "the smallest in the district," she said with a smile. It is not a place where she spends a lot of time. As a teacher in her building mentioned, "Gene is always on the go, in classrooms, lunchroom, playground, and because of her curriculum expertise, she is often pulled to the district office to sit on committees."

In the five years Gene was the principal at Gibson Elementary, the school saw a huge increase in student achievement and a closure in the achievement gap between low-income students and more affluent students in the building.

There were five categories that came to the forefront in terms of Gene's contributions to student success at Gibson Elementary School: (1) organizing scheduling to support instruction, (2) creating a positive school community using incentives through a Positive Behavior Intervention System (PBIS), (3) facilitating a targeted, comprehensive after-school program (4) supporting professional learning communities (5) facilitating data-driven instruction and comprehensive interventions.

### **Scheduling That Supports Instruction**

The academic schedule at Gibson consists of common 90-minute literacy blocks and 60-minute math blocks at each grade level. There is an additional 30 minute intervention block for literacy, where teachers provide 30 additional minutes of literacy and math instruction throughout the day. Each grade level has common prep time. Gene states: "My fourth year I took control of the schedule. I just got tired of trying to make everyone happy with the schedule, and, as we moved to more co-teaching initiatives, it was imperative that I scheduled these blocks." A third grade teacher noted, "The schedule has become more comprehensive to our school programming and provided us support during these critical instructional periods."

In addition to scheduling intervention blocks, Gene also used a REACH grant to pay for substitute teachers so that full-time classroom teachers could meet for two hours one day a month to look at student data collaboratively. Gene stated, "The teachers really got into this and appreciated the time they were given to meet with each other and to look at student data." A third-grade teacher agreed: "The release times allow us to focus on each student as an individual and plan appropriate instructional opportunities based on their strengths and needs."

To implement initiatives in Gene's building, there was a huge need for her to take over the scheduling of the instructional day for teachers. Each year, she took more and more control of the schedule to get it where she wanted. Implementing literacy, math, and intervention blocks and placing resource teachers in the classroom in a co-teaching framework could not be done without a schedule that supports these initiatives.

## **Creating a Positive School Community Using Incentives through a Positive Behavior Intervention System (PBIS)**

Gibson Elementary School has incentives for positive behavior. The school implemented a Positive Behavior Intervention Supports (PBIS) system, which is based on principles of applied behavior analysis and the prevention approach. The approach places a value on positive behavior support. PBIS is a framework approach for assisting school personnel in adopting and organizing evidence-based behavioral interventions into an integrated continuum that enhances academic and social behavior outcomes for all students. It is a prevention-oriented way for school personnel to (a) organize evidence-based practices, (b) improve their implementation of those practices, and (c) maximize academic and social behavior outcomes for students. PBIS supports the success of all students.

At Gibson, this program starts with a contract signed at the beginning of the school year by parents, students, and teachers. After aligning the goals at the start of the school year, a behavior matrix is established that shows expectations for student behavior in every location of the school: classrooms, hallways, bathrooms, the lunchroom, and the playground. These expectations are explained to all students throughout the school year. A kindergarten teacher mentioned, "Gene really got on board with the school district's PBIS initiative. We worked hard at it and it is an important part of our school program." A fourth grade teacher added, "We really devoted a lot of time to this program, and there have been some good changes to the climate at Gibson Elementary because of Gene's work in implementing this."

In addition to the PBIS framework, Gene believes in rewarding students who meet these behavior expectations. "It is important to recognize positive behavior," Gene said. "This is more important in my opinion than recognizing negative behavior...it sends a message to students that doing the right thing gets more attention than doing the wrong thing." Gibson Elementary has an incentive called the T.A.G program, which stands for "Together we Achieve at Gibson." Students who meet certain expectations wear a tag to an assembly where they are recognized in front of the whole school and rewarded. Another incentive at Gibson is Bandit Bucks, which students receive for positive behavior. Students can use Bandit Bucks to buy items from the school store. Students

who demonstrate positive behavior in the lunchroom get to eat lunch at a gold table every Friday. The classroom that keeps their bathroom the cleanest receives a golden plunger.

A kindergarten teacher at Gibson Elementary School said it best: "We have all kinds of incentive programs here that all of the kids respond well to; Gene does an excellent job orchestrating these incentives." It is important to note that the PBIS program was started district wide, and Gene did a great job, according to her staff, of putting this program in place at Gibson. The best measure of her success in creating a positive school community was the suspension data. The year before Gene took the job as principal at Gibson there were 37 suspensions. In the five years Gene has been at Gibson, the school has had between 5 suspensions in the lowest year to 16 suspensions in the highest year.

### **Targeted after-school program**

During Gene's second year as the principal at Gibson Elementary, a district mandate was given to every principal to establish an after-school program in their buildings. "This caused many principals a little anxiety," Gene mentioned. "No extra money was given to fund this initiative." At Gibson, Gene chose to reallocate her Title 1 money and reach out to the local Boys and Girls Club. This organization is on the same side of town as Gibson Elementary School and could provide on-site structured after-school programming that consisted of a snack, a homework club, and a recreational activity.

The director of the program stated, “Gene definitely had a vision of what she wanted us to do, so it made it easy for us to all be on the same page.” When the program first started, however, there were a lot of negatives. A fourth grade teacher stated, “The Boys and Girls Club program didn’t have much structure at first; kids weren’t completing assignments, and the program was extremely poor; kids were running through the building.” However, each year the program improved because of Gene’s leadership. Gene stated: “I told the Boys and Girls Club director that we had to come up with a better plan. we talked about what the students needed academically, socially, and recreationally in addition to the school day.”

The Boys and Girls Club and Gene decided to target 50 students who could most benefit from the program based on academic needs, home situations, and behavior in school. The program has six components and a well-laid-out schedule. The program runs Monday through Friday from 3:00 pm. to 5:15 pm. It is structured as follows:

3:00-3:20	Snack and community-building activity
3:20-4:00 Club	Academic activity and Power Hour Homework
4:00-4:45	Enrichment programming and activity
5:05-5:15	Dismissal

Gene’s leadership with the after-school program at Gibson Elementary, working with the Boys and Girls Club, is why the program was a success. As Gene mentioned, “Many teachers were irritated by the program the first year; it was unstructured, and they were unimpressed with the impact it had on students’ academics.” As Gene took a more active approach in working with the Boys and Girls Club director and providing structure, the program became more successful. This is apparent in teachers’ positive comments about the program and other principals wanting to model the structure. The club director stated, “We have two other elementary buildings this year that reached out to us to set up programming in their buildings they have specifically referenced Gibson’s program as a framework.” Another teacher mentioned, “This past year the program was well done. Kids were completing their homework, and the program was great for students with behavior issues.”

### **Professional Learning Communities**

While PBIS drives Gibson’s school culture, Professional Learning Community (PLC’s) procedures drive the way teachers interact in regards to student achievement. Much like after-school programs, PLCs were a district initiative; however, it took leadership from principals in the district to make them work. The former executive director of student achievement stated:

We gave a directive and provided training; however, when we went out to the buildings to see who was doing what, only a few principals were able to put it into practice...it required the ability to schedule, organize data in an informative useful way and lead discussions in regards to the data.

A fourth grade teacher agreed: “One way Gene was able to help me become a more effective teacher was by organizing PLC meetings to track student progress using data walls/boards and forms that were kept in a binder.”

The process started with establishing a common language. “We needed to decide what data was going to be looked at in order to drive the discussion at our meetings,” Gene stated. A form was developed to keep track of each student at Gibson Elementary School; it contained all of the



students formative and summative assessments, report card data, and special needs and services (English language learner, special education, speech and language, and so on). In addition, every meeting has a documented form and objective. Each grade level has a facilitator, and for each subject a goal for the year is set (for example, “80% of our students will be proficient or above in math this school year”). After the goal is set, pieces of evidence are identified that will be examined to determine whether the goals have been attained. A third grade teacher stated, “We use MAP testing, running records, and other common assessments put on our data wall in order to see progress students are making.” From there, students may be identified as “on watch” based upon their performance on given assessments. Students on “watch” are discussed at each grade level, and the question of how student needs are addressed in the universal curriculum is discussed. Students who need extra help outside of the universal instruction are identified. These students are given a selected option or an intervention in addition to the universal instruction they receive. The interventions for literacy consist of small group instruction with a literacy specialist or reading intervention teacher; for math, an intervention program was purchased by the district.

It is important to note that Professional Learning Communities (PLCs) have been around for nearly a decade, so the PLC itself is not what has led to an increase in student achievement. However, the principal’s coming up with a process for establishing meeting times and organizing the common language necessary to have effective professional learning communities is the relevant practice. Using the PLC model to track student progress, developing and using common forms so everyone is on the same page, and being able to manage and update an assessment wall are important practices that Gene implemented. Gene made PLCs at Gibson Elementary School work effectively.

### **Data-driven instruction and comprehensive intervention**

A first-grade teacher, when asked what the principal has done to raise student achievement at Gibson, stated, “Scheduling time for student interventions, having a system to identify which students need those interventions the most, and getting them into those interventions was key for Gene’s success in raising student achievement.” Once this process of monitoring and identifying students was in place, the question remained as to what was needed to move forward. “This was the key to it all,” Gene stated. “Being able to identify who needs extra help means nothing if you aren’t able to give it systemically.” Of the six teachers interviewed in this building, five mentioned that this was one of the top five actions Gene implemented that led to the increase of student achievement. “It’s one thing to know it’s important in theory, but being able to have a schedule that supports it and making available the necessary personnel to pull it off was a huge strength of Gene’s,” a third grade teacher mentioned.

Over the last two years, Gene scheduled an intervention block at each grade level outside of the normal literacy and math blocks. During these times, students meet with the literacy specialist, an English as a second language (ESL) support teacher, or a Special Education teacher to meet minutes and provide interventions to students below grade level. In addition, Gene organized interventions during after-school programming. She reserves 25 spots in the after-school program for students to do interventions on the computer, or in a small reading group. This provides additional programming for students who need extra assistance in math and reading. The director of the after-school program stated:

Our first two years at Gibson, we just conducted a homework club; the last two years Gene wanted us to target the academic piece a little more so we developed a plan to find out which students needed extra help, and we got it for them.

Data-driven instruction, and these interventions that led to the increase in student achievement, came about by the question that Gene would pose after every PLC meeting. She

stated, “I would ask them, ‘How will your observations, the data that you looked at, change or drive your instruction?’” She added:

The question was critical to ask over and over to my staff, and I expected a response. So many times we bombard people with trainings and data, but we never find out if it is useful to them. If they could answer this question effectively, I knew good information was discussed. If

they couldn’t answer effectively, I knew I needed to facilitate these meetings differently. They probably thought this question was for them, but their answers were just as important for me also.

### **Case Summary**

The case study of Gene Still man, principal of Gibson Elementary School, provides an overview of Gene’s professional background and the school context at the time of my study. Supports that have contributed to the increase of student achievement in Gene’s building include organizing scheduling that supports instruction, creating a positive school community with incentives through PBIS, establishing and maintaining a targeted, comprehensive after-school program, creating meaningful professional learning communities, and making sure staff are using data-driven instruction methods and a comprehensive intervention system.

### **CROSS-CASE SUMMARY AND IMPLICATIONS**

Principal-provided support was recorded through a process of data triangulation that is, the provided support was recorded only if it was mentioned by three of the following: principal, teachers, or district personnel, or in document analysis. It is important to emphasize that Mary led the implementation of aligning curricula to the standards and developing common assessments. When Gene took the position, this was done on a district scale, so it was in place in her building; she just did not lead the initiative. Table 6 represents only the supports provided by the principals.

<b>Table 6.1</b> <b>PERSPECTIVES ON LEARNING ENVIRONMENT AND PRINCIPAL-PROVIDED SUPPORT</b>		
<b>Perspective on Learning Environment Framework</b>	<b>Mary’s Support</b>	<b>Gene’s Support</b>
Learner Centered	Led Data Driven Instruction Efforts	Led Data Driven Instruction Efforts  Establish a targeted after school program
Knowledge Centered	Curriculum Aligned to the standards	

Assessment Centered	Led the development of Common Assessments Professional Learning Communities	Professional Learning Communities
Community Centered	Professional Learning Communities  Parent Organization Facilitation Tribes	Professional Learning Communities  Parent Organization Facilitation Incentives  Positive Behavior Intervention System
Other	Budgetin/Scheduling	Budgeting/Scheduling

### **What Supports Did the Elementary Principals in These High-achieving Schools Implement That Increase Student Achievement?**

Mary and Gene both believe that instruction should be driven by data. This is evident through the professional learning communities in both schools, where student achievement data are examined and ways to proceed instructionally are identified. Data and the appropriate use of data were at the core of many teachers' answers to questions about instruction. At Monroe, data drives teachers' grouping of students for reading and math. At Gibson, data drives reading and math instruction as well. Both principals use data to identify interventions for students who are behind in math and reading.

Another practice that both principals have in common is engaging a strong parent organization into the school culture. Both Monroe and Gibson have strong parent organizations that host monthly meetings and activities. Due to the demographic differences of the schools, there is some variance in the types of activities and planning that takes place in regard to these organizations at each building. For example, at Monroe, most of the events are student performances (songs, recitals, ice cream social, etc.). These are done at Gibson as well, but in addition to the annual Halloween parade and end of the year carnival, there are educational game nights, parent information nights, library card signups, etc. Gene does a good job using PTO to get families in for fun activities but also giving parenting lessons on how they can support their children's learning.

Both principals implemented a school-wide behavior expectation plan that creates similar language between students and staff. At Monroe Elementary, it is the TRIBES program, and at Gibson Elementary, it is the Positive Behavior Intervention System.

Budgeting and scheduling are also practices that both principals are involved in. The principals' ability to budget building funds and schedule a comprehensive day while protecting the classroom learning time was a big factor in winning over teachers and showing them that a schedule and money will support them in meeting district initiatives regarding instruction. This was evident in the interview responses teachers gave in regard to identifying practices that their principals had taken to raise student achievement. Most teachers commented that having a schedule and getting money for materials so they could meet district requirements in regard to curriculum was a key to their being able to meet the needs of their students and raise student achievement.

### **Did These Supports Differ in the High Achieving Low-income Schools?**

One of the principal supports that are different between the two schools is the establishment of school-wide incentives at Gibson. Gibson's TAG initiative recognizes students on a quarterly basis with an assembly for good academic performance and behavior. These rewards were also huge. The principal partnered with community agencies such as the movie theatre, Six Flags, restaurants (Culvers, Subway, Pizza Hut, etc.), a roller rink, and a minor league baseball team to get prizes for every positive aspect expected from students. These rewards included free kids meals for perfect attendance, reading awards from Pizza Hut, and drawings for bicycles and baseball tickets donated by local agencies. Gene stated, "Many of these awards were things that kids could provide for themselves and families by doing well in school that their parents could not afford." This practice is significantly different than anything in place at Monroe identified through the data. At Monroe, through the TRIBES program, positive actions are expected, not rewarded. At Gibson, positive student actions are expected and highly awarded.

Another difference between the two schools is that Gibson has a comprehensive, targeted after-school program. The data that I collected about Monroe Elementary did not reveal any type of similar program. The after-school program at Gibson extends the school day of many low-income students who are not performing at grade level with regular classroom instruction received during the school day. Students are provided a structured place to receive tutoring, complete homework, and participate in character- building activities.

### **Implications for Further Research**

In addition, further research on how incentives and targeted after-school programs affect student performance in schools that are predominately low-income would be valuable. Sample research questions might include:

- How do academic and behavioral incentives affect low-income students, and to what extent, if at all, is the affect different from predominately high- income students?
- What affect does after-school programming have on the achievement of low-income students, and to what extent, if at all, is the affect different from predominately high-income students?

## Limitations

In this study, I make no attempt to generalize beyond the two schools under investigation. As such, findings are limited to the context examined here, although it is my belief that the findings can be useful to schools with similar demographics and resources. In addition, this study looked at the supports provided by the principal. Based on previous research, this may or may not affect student achievement directly. There is enough reported data in this study to assume that the provided supports by the principal may have indirectly affected student achievement in their buildings, but to what level these supports affected student achievement is inconclusive.

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# QUALITY OF EDUCATION AND STUDENT INPUT: AN AGENCY PERSPECTIVE

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## ABSTRACT

*How should the quality of education be determined? How should the teachers be evaluated? Regardless of the proxies selected to measure success in education, there is always an element of information asymmetry when it comes to performance evaluation for teachers. That is, how learning takes place in the classroom, short of constant and regular monitoring, is unknown to outsiders and therefore prevents a thorough evaluation. This research adopts an agency framework to look at the issues of performance evaluation in education. In particular, it studies the usefulness of student satisfaction survey as an input to the teachers' personnel decisions (tenure, promotion, merit pay, etc.)*

*This research takes into account the incentives of various stakeholders in education and comes up with situations where it is beneficial to incorporate the student survey. The conclusion is not universal, and has to be decided on case-by-case basis. It is also consistent with the notion that there is no panacea in quality improvement in education.*

## INTRODUCTION AND LITERATURE REVIEW

"Elementary and middle-school teachers who help raise their students' standardized-test scores seem to have a wide-ranging, lasting positive effect on those students' lives beyond academics, including lower teenage-pregnancy rates and greater college matriculation and adult earnings," (The New York Times, 2012) This is but one of the large body of studies and observations regarding the controversial use of value-added ratings by school districts around the country to influence decisions on hiring, pay and even firing.

While value-added metrics look at the impact individual teachers have on student test scores, other factors may contribute to the personnel decision-making process. In the context of higher (post-secondary) education, for example, the use of student satisfaction survey and even the elusive concept of collegiality are common.

On the other hand, the teachers and the unions representing them vehemently oppose the use of such measures on the ground of arbitrariness and lack of consistency, among others. At the same time, they are trying to protect the tenure system and the pay / pension package under the cloud of economic uncertainty.

As is obvious, different stakeholders look at the quality of education from very different perspectives. While the main players are getting more vocal about their positions, students are caught in between and remain silent for the most part.

This research broadly considers the pertinent players in education schools, teachers, students, and education governing (or accreditation) bodies in an agency framework. In particular, it gives voice to students by looking into whether the use of student satisfaction survey would influence the behavior of schools and teachers toward better education outcomes, a quality indicator.

It has been advocated to adapt the concept of total quality management for education (Bradley 1994, Sallis 2002, Bonstingl 1996, Mukhopadhyay 2005, Fields 1998, Greenwood and Greenwood 1998, Davies 1996). Some schools use the criteria for performance excellence of Malcolm Baldrige National Quality Award to improve their administrative process. (Cornesky et al 1991) The award itself extended the criteria and recipients from manufacturing to service sectors, including health care and education since 1998.

Customer satisfaction is a critical part of any quality measurement. It is reasonable to consider how satisfied the “customers” in the education context students feel about the quality of education they receive in the process. Colleges and universities routinely use the information gleaned from student survey to make important personnel decisions. It is less practical, however, to push the idea down to the elementary and middle-school level; instead the results from standardized tests are considered suitable proxies for quality of education.

The issue of information asymmetry seems out of place in the discussions of quality of education and performance evaluation of teachers, at a first glance. However, it is this information asymmetry between the education governing bodies and schools, and between schools and teachers, that drives the necessity of performance evaluation in the absence of direct observation. Based on the work of Feltham and Xie (1994), this research studies the circumstances under which the agency problems are serious and looks for ways to design a better performance measurement system leading to improved quality of education.

The rest of the paper is organized as follows. Section 2 sets up the model. Section 3 looks at the agency problem when student evaluation is not considered in performance evaluation which Section 4 incorporates student evaluation in the mix. The paper is concluded in Section 5.

### THE MODEL

It is assumed that there are three types of students in the traditional sense: A, B and C, in the proportion of  $1 - \omega_1 - \omega_2$ ,  $\omega_1$ ,  $\omega_2$ , respectively. “A” students are those with high achievements and continue to advance their learning process (e.g., from high school to college, from undergraduate to graduate program, etc.) and/or career path (e.g., the relative ease with which to find a suitable job) without interruption. “B” and “C” students, on the other hand, need extra help from their schools and teachers (in the form of after-school tutoring, career counseling, for example). They can then advance with success rates of  $\omega_3$  and  $\omega_4$ , respectively.  $\omega_3 > \omega_4$ . Overall, with extra help,  $\omega_1\omega_3$  of “B” students and  $\omega_2\omega_4$  of “C” students can reach their potential.

The efforts of school and teachers in the learning process are twofold: regular and extra. With regular effort  $e$ , its cost is assumed to be  $\frac{e^2}{2}$ . It costs  $t$  and  $\alpha t$  ( $\alpha > 1$ ) to help “B” and “C” students, respectively.

Put together, the cost function for schools and teachers can be expressed as

$$C = \frac{e^2}{2} + \beta_1\omega_1t + \beta_2\omega_2\alpha t \quad (1)$$

where  $\beta_1 = 1$  ( $\beta_2 = 1$ ) indicates that extra help is available for “B” (“C”) students;  $\beta_1 = 0$  ( $\beta_2 = 0$ ) otherwise.



The output function for the learning process can be indicated by

$$y = (1 - \omega_1 - \omega_2)e + (\beta_1\omega_1\omega_3 + \beta_2\omega_2\omega_4) + \varepsilon_y, \quad e \in (0,1). \quad (2)$$

It is difficult to define exactly what output is in the context of education. In this paper, it means the proportion of students who will reach their potential, with various degrees of regular and extra support from their schools and teachers.  $\varepsilon_y$  indicates external factors outside the controls of the schools and teachers with mean 0 and variance  $\sigma_y^2$  normally distributed (i.e.,  $N(0, \sigma_y^2)$ ).

Performance evaluation in education is commonly conducted by various governmental, semi-private, and private agencies (e.g., federal and state departments of education, municipal boards of education, accreditation bodies such as AACSB) for schools and by departments for individual teachers. The outcomes more often than not determine the fate of stakeholders in education, including tenure and promotion for teachers, school (re)districting, survival of a whole department, and availability of governmental grants and subsidies, to name a few.

To develop the ideas under more concrete footing, assume that the outcome of the assessment can be expressed as

$$O(y) = a + by + cs. \quad (3)$$

$a$  stands for schools' fixed subsidy or teachers' base salary.  $b$  ( $c$ ) represents the rate of subsidy in support of regular (extra) effort by the schools and teachers. The higher the outcome  $O$ , the more the budget ( $J$ ) available to the schools or the higher the salaries to the teachers, or both. Without loss of generality, it is assumed that  $J = O$ .  $s$  shows students' subjective perception of education quality received, or degree of satisfaction, as usually available in the form of student evaluation of faculty.  $s$  can be expressed as

$$s = 1 - (1 - \beta_1)\omega_1 - (1 - \beta_2)\omega_2 + \varepsilon_s. \quad (4)$$

If extra help is provided to both "B" and "C" students,  $\beta_1 = \beta_2 = 1$ , then the expected value of student satisfaction will be  $E(s) = 1$ . If only "B" ("C") students receive extra help, then  $E(s) = 1 - \omega_2$  ( $E(s) = 1 - \omega_1$ ). If no extra help is available, then  $E(s) = 1 - \omega_1 - \omega_2$ .  $\varepsilon_s$  Indicates external random factors affecting student satisfaction with mean 0 and variance  $\sigma_s^2$  normally distributed (i.e.,  $N(0, \sigma_s^2)$ ).  $\varepsilon_y$  and  $\varepsilon_s$  are unrelated. The decision problem of any governing body in education rests on the selection of the three parameters  $a$ ,  $b$  and  $c$  in equation (3).

Social costs associated with all students not being able to reach their potential can be staggering, as represented by  $k$ . Then the social costs associated with schools' and teachers' decision whether to exert extra effort can be expressed as

$$[\omega_1(1-\omega_3)+\omega_2(1-\omega_4)]k+(1-\beta_1)\omega_1\omega_3k+(1-\beta_2)\omega_2\omega_4k.$$

The first term shows the social costs from "B" and "C" students not being able to reach their potential after extra support is provided. The second (third) term is associated with not providing extra help for "B" ("C") students.

### AGENCY PROBLEM WHEN STUDENT SATISFACTION IS NOT CONSIDERED IN PERFORMANCE EVALUATION

#### Moral hazard is absent ( $\beta_1 = \beta_2 = 1$ )

When the education authority can observe schools' and teachers' behavior with relatively low cost, it can ensure that "B" and "C" students are taken care of with extra help they need. Under the circumstance, it will determine how performance evaluation should be carried out. Correspondingly, the schools and teachers will choose how to respond with the effort level that benefits themselves the most. The following program shows the incentive issues involved:

$$\underset{a,b}{Max} E\{y-J-[\omega_1(1-\omega_3)+\omega_2(1-\omega_4)]k\} \quad (5)$$

subject to

$$U[a+by-\frac{e^2}{2}-\omega_1t-\omega_2\alpha t] \geq U_0 \quad (IR)$$

$$e, \beta_1, \beta_2 \in \text{Argmax} U[a+by-\frac{e^2}{2}-\omega_1t-\omega_2\alpha t] \quad (IC)$$

Individual rationality (IR) means that the reward for schools and teachers must be high enough for them to participate; incentive constraint (IC) means that schools and teachers will try to maximize their own utility.

For a representative school official or teacher, it is assumed that (s) he is risk and effort averse with negative exponential utility function, or  $U(W) = -e^{-rW}$ .  $r$  is the individual's index of absolute risk aversion ( $r > 0$ ) and  $W$  is the reward or compensation. Given the performance evaluation regime as set forth by the education governing agency, (IC) can be simplified as

$$\underset{e, \beta_1, \beta_2}{Max} \{a+b[(1-\omega_1-\omega_2)e+(\omega_1\omega_3+\omega_2\omega_4)+\varepsilon_y]-\frac{e^2}{2}-\omega_1t-\omega_2\alpha t-\frac{rb^2\sigma_y^2}{2}\}.$$

Its first derivative shows the second-best level of effort as

$$e^* = (1-\omega_1-\omega_2)b^*. \quad (6)$$

It means that the schools' and teachers' regular effort ( $e$ ) for "A" students depends on its rate of subsidy ( $b$ ): more compensation, more effort. Inversely, when there are more "B" and/or "C" students around (i.e., higher percentages of  $\omega_1$  and  $\omega_2$ ), the less regular effort will be available for "A" students.

Certainty equivalent (CE) is defined as  $E(U) = U(CE)$ . At optimality, not only is (IR) binding, but also  $CE = 0$ . From (IR), it can be inferred that

$$E(J) = E(a + by) = \frac{e^2}{2} + \omega_1 t + \omega_2 \alpha t + \frac{rb^2 \sigma_y^2}{2}.$$

With this and (6) inserted into (5), the education governing body's problem becomes

$$\begin{aligned} \underset{a,b}{Max} E \{ & (1 - \omega_1 - \omega_2)^2 b - [(1 - \omega_1 - \omega_2)^2 + r\sigma_y^2] \frac{b^2}{2} - \omega_1 k - \omega_2 k \} \\ & + [\omega_1 \omega_3 + \omega_1 \omega_3 k - \omega_1 t] + [\omega_2 \omega_4 + \omega_2 \omega_4 k - \omega_1 \alpha t] \end{aligned}$$

Taking first differentiation with respect to  $b$ , the optimal subsidy rate becomes

$$b^* = \frac{(1 - \omega_1 - \omega_2)^2}{(1 - \omega_1 - \omega_2)^2 + r\sigma_y^2}, \quad (7)$$

which is influenced by the percentages of "B" and "C" students in the population, the random factor in student satisfaction survey, and the schools' and teachers' level of absolute risk aversion. This is the second-best solution for the proper level of incentive to influence behavior because the education authority can't observe how schools and teachers exert their effort. Otherwise,  $\sigma_y^2 = 0$  will lead to  $b^* = 1$  (first-best level of incentives) and  $e^* = 1 - \omega_1 - \omega_2$  (first-best level of effort).

### Moral hazard is present ( $\beta_1 = 0$ or $\beta_2 = 0$ )

When moral hazard is present and the education governing body can't observe with reasonable cost what the schools and teachers are doing, the programming issue becomes

$$\underset{a,b}{Max} E \{ y - J - [\omega_1(1 - \omega_3) + \omega_2(1 - \omega_4)]k - (1 - \beta_1)\omega_1\omega_3k - (1 - \beta_2)\omega_2\omega_4k \}$$

subject to

$$U[a + by - \frac{e^2}{2} - \beta_1\omega_1 t - \beta_2\omega_2 \alpha t] \geq U_0 \quad (IR)$$

$$e, \beta_1, \beta_2 \in \text{Argmax } U[a + by - \frac{e^2}{2} - \beta_1\omega_1 t - \beta_2\omega_2 \alpha t] \quad (IC)$$

(IC) can be rewritten as

$$\underset{e, \beta_1, \beta_2}{Max} \{ a + by - \frac{e^2}{2} - \beta_1\omega_1 t - \beta_2\omega_2 \alpha t - \frac{rb^2 \sigma_y^2}{2} \}.$$

With differentiation, we get

$$e = (1 - \omega_1 - \omega_2)b \quad (8)$$

$$\beta_1 = 1 \text{ if } b\omega_3 \geq t$$

$$\beta_1 = 0 \text{ if } b\omega_3 < t$$

$$\beta_2 = 1 \text{ if } b\omega_4 \geq \alpha t$$

$$\beta_2 = 0 \text{ if } b\omega_4 < \alpha t.$$

From (8), it's clear that the regular help for "A" students depends on  $b$ ,  $\omega_1$  and  $\omega_2$ , as before. But the extra help for "B" and "C" students depends on  $\alpha$ ,  $t$ ,  $\omega_3$  and  $\omega_4$  as a result of cost-benefit comparison. For example, if the benefit of extra help for "B" students ( $b\omega_3$ ) is at least as high as the cost of doing so ( $t$ ), then the schools and teachers will make available extra help for "B" students (i.e.,  $\beta_1 = 1$ ). In addition, since  $\alpha > 1$ , it will require more incentives for schools and teachers to provide extra help for "C" students. The education governing body's programming can be further simplified as

$$\underset{a,b}{\text{Max}} E\{y - J - [\omega_1(1 - \omega_3) + \omega_2(1 - \omega_4)]k - (1 - \beta_1)\omega_1\omega_3k - (1 - \beta_2)\omega_2\omega_4k\} \quad (9)$$

subject to

$$\beta_1 = 1 \text{ if } b\omega_3 \geq t$$

$$\beta_1 = 0 \text{ if } b\omega_3 < t$$

$$\beta_2 = 1 \text{ if } b\omega_4 \geq \alpha t$$

$$\beta_2 = 0 \text{ if } b\omega_4 < \alpha t$$

Proposition 1. Performance evaluation without the input of student survey will not necessarily lead the schools and teachers to ignore "B" and "C" students.

Corollary 1.1. If  $t \leq \frac{\omega_4 b^*}{\alpha}$ , then the regular performance evaluation criteria provide sufficient incentive for schools and teachers to help "B" and "C" students with extra effort.

Corollary 1.2. If  $\frac{\omega_4 b^*}{\alpha} < t \leq t^{c1} < \omega_3 b^*$ , the education authority will induce the schools and teachers to exert more extra help for "B" and "C" students, resulting in welfare loss.

Corollary 1.3. If  $\frac{\omega_4 b^*}{\alpha} < t^{c1} < t \leq \omega_3 b^*$ , then the schools and teachers will provide extra help for "B" students only, but the education authority emphasizes the level of second-best regular help.

Corollary 1.4. If  $\omega_3 b^* < t \leq t^{c2}$ , the education authority will provide more incentive for regular help up to  $\frac{\alpha t}{\omega_4}$ , resulting in welfare loss.

Corollary 1.5. If  $\omega_3 b^* < t^{c2} < t \leq t^{c3}$ , the education authority will provide more incentive for regular help up to  $\frac{t}{\omega_3}$ , resulting in welfare loss.

Corollary 1.6. If  $t > t^{c3} > t^{c2} > \omega_3 b^*$ , the schools and teachers do not provide extra help.

## AGENCY PROBLEM WHEN STUDENT SATISFACTION IS INCLUDED IN PERFORMANCE EVALUATION

When student satisfaction is included in performance evaluation, the education authority is considering the following programming problem.

$$\underset{a,b,c}{Max} E\{y - J - [\omega_1(1 - \omega_3) + \omega_2(1 - \omega_4)]k - (1 - \beta_1)\omega_1\omega_3k - (1 - \beta_2)\omega_2\omega_4k\}$$

subject to

$$U[a + by + cs - \frac{e^2}{2} - \beta_1\omega_1t - \beta_2\omega_2\alpha t] \geq U_0 \quad (IR)$$

$$e, \beta_1, \beta_2 \in \text{Argmax } U[a + by + cs - \frac{e^2}{2} - \beta_1\omega_1t - \beta_2\omega_2\alpha t] \quad (IC)$$

(IC) represents the schools' and teachers' optimization problem in response to the inclusion of student satisfaction in the performance evaluation criteria. (IC) can be simplified as

$$\underset{e, \beta_1, \beta_2}{Max} \{a + by + cs - \frac{e^2}{2} - \beta_1\omega_1t - \beta_2\omega_2\alpha t - \frac{rb^2\sigma_y^2}{2} - \frac{rc^2\sigma_s^2}{2}\} \quad (10)$$

First differentiation shows that

$$e = (1 - \omega_1 - \omega_2)b \quad (11)$$

$$\beta_1 = 1 \text{ if } b\omega_3 + c \geq t$$

$$\beta_1 = 0 \text{ if } b\omega_3 + c < t$$

$$\beta_2 = 1 \text{ if } b\omega_4 + c \geq \alpha t$$

$$\beta_2 = 0 \text{ if } b\omega_4 + c < \alpha t$$

With student satisfaction survey added to the performance evaluation mix, the regular help for "A" students still depends on  $b$ ,  $\omega_1$  and  $\omega_2$ , as before. Also, the extra help for "B" and "C" students is determined by the result of a cost-benefit comparison.

The education authority does have more leeway in inducing the schools and teachers to care for "B" and "C" students, with the revised programming

$$\underset{a,b,c}{Max} E\{y - J - [\omega_1(1 - \omega_3) + \omega_2(1 - \omega_4)]k - (1 - \beta_1)\omega_1\omega_3k - (1 - \beta_2)\omega_2\omega_4k\} \quad (12)$$

subject to

$$\beta_1 = 1 \text{ if } b\omega_3 + c \geq t$$

$$\beta_1 = 0 \text{ if } b\omega_3 + c < t$$

$$\beta_2 = 1 \text{ if } b\omega_4 + c \geq \alpha t$$

$$\beta_2 = 0 \text{ if } b\omega_4 + c < \alpha t$$

Proposition 2. Performance evaluation with the input of student survey will not necessarily lead the schools and teachers to exert more effort for "B" and "C" students.

Corollary 2.1. If  $t \leq \frac{\omega_4 b^*}{\alpha}$ , then student survey is redundant. The incentives in place are enough to induce the schools and teachers to take care of "B" and "C" students.

Corollary 2.2. If  $\frac{\omega_4 b^*}{\alpha} < t \leq t^{c1} < \omega_3 b^*$ , the welfare loss is reduced when the schools and teachers provide regular help for “B” and “C” students.

Corollary 2.3. If  $\frac{\omega_4 b^*}{\alpha} < t^{c1} < t \leq t^{c4} < \omega_3 b^*$ , the use of student survey encourages the schools and teachers to help “B” and “C” students.

Corollary 2.4. If  $\frac{\omega_4 b^*}{\alpha} < t^{c1} < t^{c4} < t < \omega_3 b^*$ , the schools and teachers will only provide help for “B” students. The use of student survey makes no difference.

Corollary 2.5. If  $\omega_3 b^* < t \leq t^{c2}$ , the welfare loss is reduced when the schools and teachers provide regular help for “B” and “C” students.

Corollary 2.6. If  $\omega_3 b^* < t^{c2} < t \leq t^{c5} < t^{c3}$ , the schools and teachers will only provide help for “B” students. However, the use of student survey will extend their help to “C” students as well.

Corollary 2.7. If  $\omega_3 b^* < t^{c2} < t^{c5} < t < t^{c3}$ , the schools and teachers will only provide help for “B” students. The use of student survey makes no difference.

Corollary 2.8. If  $\omega_3 b^* < t^{c2} < t^{c5} < t^{c3} < t \leq t^{c6} < t^{c7}$ , the use of student survey forces the schools and teachers to provide help for both “B” and “C” students.

Corollary 2.9. If  $\omega_3 b^* < t^{c2} < t^{c5} < t^{c3} < t^{c6} < t < t^{c7}$ , the use of student survey forces the schools and teachers to provide help for “B” students only. Without the survey, no help is provided.

Corollary 2.10. If  $\omega_3 b^* < t^{c2} < t^{c5} < t^{c3} < t^{c6} < t^{c7} < t$ , the education authority will set the performance criteria at the second-best level. Schools and teachers will not exert effort to help students.

## CONCLUSIONS

This paper introduces the agency framework to study the current topic of performance evaluation in education and the validity of using student survey for teachers’ personnel decisions. The results do not point to one solution to the exclusion of other alternatives. Instead, many factors (the aptitude of students, the effort and cost of the teachers and the schools, the evaluation criteria used by the education governing bodies, even the social costs associated with students not reach their potential, etc.) drive the best approach. In other words, the circumstances (as observed by the conditions under various corollaries) dictate the appropriate incentives for teachers and schools to help students reach their potential.

The contributions of this research are: (1) Extend the concept of information asymmetry in an agency framework to look into the issue of performance evaluation in education, (2) With the help of multi-task principal / agent relations, clarify the circumstances under which it is helpful to incorporate student survey in personnel decisions, and (3) Make available the methodology for similar research in different instruction levels, from elementary to higher education.

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## EXCEL TRAINING & THE TECHNOLOGY STUDENT LEARNING OUTCOME

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### ABSTRACT

*Students' advanced competencies in the use of spread sheets are required by professionals in the field, and are mandated by the American Institute of Certified Public Accountants' (AICPA) professional competencies to enter the profession (AICPA, 2005). Use of computer spread sheets for analysis of data, calculations, and financial analysis is among the skill sets tested on the CPA examination (Board of Examiners, 2009). Accounting faculty need to teach these skills, and measure the results of their teaching (ACBSP, 2014). This paper reports the results of efforts to teach and measure the results of teaching the requisite skills in the use of industry-standard spread sheet software in the junior-year intermediate accounting classroom. The treatment group received online training in Excel skills through a Microsoft® Excel certification program, in addition to training in the accounting classes, and they took separate Microsoft® Excel certification tests documenting their absolute skills levels. The control group received no special training. Excel skills test were given, pre- and post-test, to control and treatment groups, to test the null hypothesis of no difference in the pre and post treatment test scores. The test statistic  $t$  was  $-1.8651$  ( $df$  70) and the  $p$ -value was .0664 for the two-tailed test. The null hypothesis of no difference in the pre and post means for the treatment group was rejected at the 10% level of significance. Results indicated emphasis on the use of spread sheets through programs of this kind may be helpful in meeting student learning outcomes related to stakeholder demands for graduates to effectively leverage technology for data analysis, calculations, and financial analysis.*

*Key words: spread sheet technology, learning outcomes, accounting, MOS, Excel.*

## Introduction

Students' and graduates' advanced competencies in the use of industry-standard spread sheet software are required by professionals in the field (K. Falk, personal communication, April, 2014) and are mandated by the American Institute of Certified Public Accountants' (AICPA) professional competencies to enter the accounting profession (AICPA, 2005). Use of spread sheets for analysis of data, calculations, and financial analysis are among the skills tested on the CPA examination (Board of Examiners, 2009). According to K. Falk, Padgett Strademann & Co., a mid-sized regional CPA firm with about 40 partners in Houston, Austin, and San Antonio, are generally surprised at the lack of Excel skills among students in their intern classes. They have inquired specifically about the preparation and Excel requirements included in the Master of Science in Accounting degree's curriculum, and have commented that an Excel certification requirement in Intermediate Accounting would be a positive way to set students apart when they apply for jobs. Accounting faculty need to teach these skills, and measure the results of their teaching (ACBSP, 2014). This paper reports the results of efforts to teach, and measure the results of teaching, the requisite skills in the use of industry-standard spread sheet software, in the junior-year intermediate accounting classrooms.

## Literature

Low scores on internship supervisors' ratings of accounting students' use of technology, including Excel, showed accounting students may not meet student learning outcome goals with regard to the use of technology (Elrod & Tiggeman, 2011). A recent study of business employers' expectations for technological proficiencies of business school graduates indicated there was a wide gap between students' perceptions of their skill levels and their actual proficiencies (Bingi, Karim, & Rassuli, 2013). Students' motivation and learning were enhanced with their skill in using spreadsheets for problem solving (Clayton & Sankar, 2009).

Birge (2004) showed that students can improve performances after instruction in Excel. In his study, students had previous training in modeling techniques and theory, but no training using the high-end Microsoft® Excel tool Solver. After training, students' performances in solving sophisticated travel scheduling problems improved significantly, and the improvements appeared to have been caused by the training, as there were no other important casual factors (e.g., gender, etc.) identified.

In a study in a school of nursing, which may be analogous to a professional accounting program, the use of Microsoft® Excel in teaching a core competency required by a professional organization was addressed (DiMaria-Ghalili & Ostrow, 2009). Students had no previous Excel experience, but were able to become comfortable and report positive feedback using Excel as a research tool in a professional environment. The authors concluded Excel skills effectively incorporated in the academic context could produce useful professional skills.

## Method

The strategy employed in this study was to test a treatment group before and after spreadsheet training in upper division intermediate accounting classes, and to compare the results of those tests to results produced by a control group from other accounting classes that did not participate in the training, using the pretest-posttest non-equivalent groups quasi-experimental design described by Trochim (2001). Results were compared, using *t*-tests, for differences in the mean scores of the treatment group to the mean scores of the control group.

The treatment group of student participants received online training in Excel skills through a Microsoft® Excel certification program (MOS), in addition to their normal hands-on training in the accounting classes, and they took separate Microsoft® Excel certification tests documenting their absolute skills levels. The control group received no special training in addition to their normal hands-on training in the accounting classes. An Excel skills test was designed and administered to control and treatment groups, on pre and post treatment bases, to provide objective data about participants' skill levels.

The Excel skills test was created from a test bank available from Cengage Learning. Most of the upper level students tested took a computer literacy course that included access to a web based learning management system entitled Skills Assessment Manager (SAM). The Office Excel 2013 test bank included 150 multiple choice questions, that were downloaded, reviewed, and reduced to 30 questions used in the pre and post assessment. The questions were limited to the basic skills tested in the Microsoft® Office Specialist exam and were very basic in nature. The questions centered on (a) formulas, (b) adding, deleting, and modifying data, (c) formatting, (d) toolbar ribbon commands, and (e) shortcut keys.

The treatment group and the control group were non-equal in that either the pre-or post-treatment scores for both groups could be shown statistically the same. This was demonstrated by a descriptive comparison of the mean pre-treatment test scores for the control and treatment groups, and of the mean post-treatment test scores for the control and treatment groups. Null hypotheses of the equality of the means pre- and post-treatment across the groups were rejected at the 5% level of significance, showing the two groups had significantly different mean scores, both before and after the treatment. See Table 1.

### The null hypotheses for the study were:

*H1 There is no difference in the mean scores of the pre-test control group and the post-test control group on the Excel skills test.*

*H2 There is no difference in the mean scores of the pre-test treatment group and the post-test treatment group on the Excel skills test.*

The control group did not receive any treatment, but was tested twice, at the same times as the pre- and post-treatment tests for the treatment group were administered. The treatment group consisted of 43 for the pre-treatment tests, and 29 for the post-treatment tests. The control group consisted of 86 for the pre-treatment tests, and 76 for the post treatment tests. The treatment group participants were undergraduate accounting students enrolled in Intermediate

Accounting-II. The control group participants were undergraduate accounting students enrolled in Principles of Accounting.

<b>Table 1</b> <b>Means, standard deviations, and n's for the pre-treatment and post-treatment control group compared to the treatment group, and t-tests for the differences in means across the groups</b>				
Pre			Post	
	Control	Treatment-	Control	Treatment-
Mean	6.978	7.605	7.422	8.072
St. Dev.	1.770	1.109	1.839	0.936
<i>n</i>	86	43	76	29
Pooled variance	2.504		2.701	
<i>t</i>	-2.460		-2.378	
<i>df</i>	120		94	
p-value	0.0153		0.0194	
Test result	Reject		Reject	

## Results

The treatment group's mean scores increased .4675 points, compared to a .445 increase for the control group. The control group did not receive any of the training given to the treatment group.

For the control group (*n* 86 pre and *n* 76 post) the pre and post means were 6.978 (standard deviation 1.770) and 7.422 (standard deviation 1.839) respectively, and the pooled variance was 3.250. Null hypothesis 1 (no difference in the mean test scores for the control group's pre- and post- scores) could not be rejected at the 10% level of significance ( $t = -1.568$ ,  $df = 160$ ,  $p$ -value 0.119.)

For the treatment group (*n* 43 pre and *n* 29 post) the pre and post means were 7.605 (standard deviation 1.109) and 8.072 (standard deviation 0.936) respectively, and the pooled variance was 1.088. For the treatment group the test statistic  $t$  was -1.8651 ( $df$  70) and the  $p$ -value was .0664, for the two-tailed test. The null hypothesis of no difference in the pre-test and post-test means for the treatment group was rejected at the 10% level of significance. See Table 2 for a summary of these statistics.

Becker (2014) suggested evaluation of effect size in terms of normal, where normal is defined as within one standard deviation from the mean of the normative or control group. Under that definition, the effect size for the mean of the post-test treatment group can be characterized as non-normal or other than normal. Calculations of Cohen's  $d$  ( $d = -0.4458$ , with effect size  $r = 0.2176$  using  $t$  values and  $df$ , or  $d = -0.4455$ , with effect size  $r = -0.2174$  using means and standard deviations) led to characterization of the effect size as small.

Table 2				
Means, standard deviations and <i>ns</i> for the pre-treatment and post- treatment control group and treatment group, and <i>t</i> -tests for the differences in means				
	Control		Treatment	
	Pre-	Post-	Pre-	Post-
Mean	6.978	7.422	7.605	8.072
St. Dev.	1.770	1.839	1.109	0.936
<i>n</i>	86	76	43	29
Pooled				
variance		3.250		1.088
<i>t</i>		-1.568		-1.8651
<i>df</i>		160		70
<i>p</i> -value		0.119		0.066
Test result				Reject
Note: Level of significance 10% in the two-tailed test.				

### Conclusion, limitations, and suggestions for further research

Employers and industry-standards require that accounting graduates be skilled in problem solving and data analysis using industry-standard spread-sheet technology. University student learning outcome goals for student competencies in the use of spread-sheets should be measured.

In the study reported, the null hypothesis of no difference in the means of a post-test treatment group and a control group was rejected at the 10% level of significance. Effect size, measured by Cohen's *d*, was characterized as small. At best, the clinical or classroom effect was characterized as non-normal, or other than normal, in that the treatment group mean score lay outside one standard deviation of the mean score of the control group. Although not as robust as expected, the results indicated emphasis on the use of spread-sheet technology through training programs of this kind may be helpful in meeting the student learning outcomes related to stakeholder demands for graduates to effectively leverage technology for data analysis, calculations, and financial analysis, and do produce a measurable effect.

The chief limitation of this study lay in isolating the effect of the specific treatment from changes over time in students' demonstrated abilities with industry-standard spread-sheet software. Study participants were enrolled in an integrated bachelor's/master's accounting program in which the use of spread-sheet software was ubiquitous, and where continuous improvement in students' spread-sheet skills was a natural outcome of normal classroom activity and assignments, and where improvement in students' use of technology was among the four major student learning outcomes of the business school, across all concentrations, majors, and programs. This is a known limitation of the pre-test post-test non-equivalent groups quasi-experimental design.

Related limitations came from having the vast majority of the control group from accounting principles classes, typically composed of second year students. The treatment group was comprised of students enrolled in the second semester of intermediate accounting classes, typically composed of third year students. Although the method format followed a pre-test post-test non-equivalent group's quasi-experimental design, participants were not assigned to the groups randomly. The first implication was that perhaps the third year students in the treatment group should have improved their Excel skills more than the second year students in the control group. This issue was not controlled for, and its effects, if any, were unknown. Data on the typical participant characteristics such as ability and experience were not collected. Data about participant gender, age, and race or ethnicity were not collected. Demographically, the control and treatment groups were large enough that they appeared to mirror the demographic analysis for students in the business school generally. However, the intermediate students generally have chosen accounting for their field of study, whereas the principles classes included students from all concentrations in the undergraduate business degree. Hence, the second implication was that perhaps accounting students should have improved their Excel skills more than the group comprised of students from all concentrations. This issue was not controlled for, and its effects, if any, were unknown.

Other limitations included the possible lack of validity for the test instrument. The Excel exam was created from a test bank available from Cengage Learning. Most of the upper level students tested took a computer literacy course that included access to a web based learning management system entitled Skills Assessment Manager (SAM). The Microsoft® Excel 2013 bank included 150 multiple choice questions, that were downloaded, reviewed, and reduced to 30 questions used in the pre and post assessment. The questions were limited to the basic skills tested in the Microsoft® Office Specialist exam and were very basic in nature, centered on formulas; adding, deleting, and modifying data; formatting; toolbar ribbon commands; and shortcut keys. The measurement effectiveness of the resulting test was not verified.

Current intentions for further study include continuation of the study for a second year, with the expectation of more robust results based on anticipated doubling of the sample sizes for both the control and treatment groups.

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# **A FRAME WORK FOR IDENTIFYING FACTORS TO CONSIDER WHEN IMPLEMENTING AN ACADEMIC PROGRAM AT A SATELLITE CAMPUS**

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## **ABSTRACT**

*Making a strategic decision to launch an academic degree program at a satellite site offers unique challenges. Many factors should be carefully considered in creating degree offerings, supporting student needs, allocating faculty resources, satisfying accreditation concerns, and meeting student demand. This paper establishes a framework and decision model regarding a satellite campus program utilizing an undergraduate accounting degree program as a case analysis. The case analysis provides details of how the components of the framework should be considered in making decisions regarding the possible implementation of a satellite academic program. The purpose of this paper is to propose a roadmap while highlighting the resources required and information to be considered in order to launch a 2+2 BBA- Accounting degrees at a satellite campus. The Kennesaw State University (KSU) BBA- Accounting program at the satellite campus in Paulding County is designed for graduates of Georgia Highland College's (GHC) Associate of Science in Business Administration degree, located at the KSU/GHC Paulding County Instructional Site.*

## **INTRODUCTION**

Institutions of higher education strive to meet market demand for access to a quality education in various formats while attempting to meet the demands of varying demographics of students. The variation in demographics can range from the traditional 18-year-old student who just graduated from high school to the 50-year-old non-traditional working student who always desired to complete a college education. Also included is the 25-year old who started college but had to stop-out due to financial demands, military service, family commitment or poor performance. Some of these needs are met with the utilization of technology. Today's technological instructional delivery methods include offering online courses in various formats including fully online or hybrid/blended, which can be delivered in a synchronous real-time format or asynchronous format for self-pacing purposes. Additionally, the recent popularity in the advent of MOOC's (Massive Online Open Courses) has expanded the interest in online delivery.

However, many universities and students still see the value of the traditional college campus. The most important aspect of the traditional campus incorporates what many students want most, that is, to interact face to face with their college professor and fellow classmates. Among the reasons cited for creating satellite campuses are to accommodate increased student enrolment and due to a community's desire for campuses closer to home (Bassett, 2011). Many areas of the United State are vastly rural with ever changing landscapes that rely on proximity to metropolitan areas or having institutions of higher

However, many universities and students still see the value of the traditional college campus. The most important aspect of the traditional campus incorporates what many students want most, that is, to interact face to face with their college professor and fellow classmates. Among the reasons cited for creating satellite campuses are to accommodate increased student enrolment and due to a community's desire for campuses closer to home (Bassett, 2011). Many areas of the United State are vastly rural with ever changing landscapes that rely on proximity to metropolitan areas or having institutions of higher education nearby. Many universities have created satellite campuses in areas to meet that demand. Allison and Ever sole (2008) argued that for university campuses to take on the catalyst role of expanding the reach of program offerings to satellite locations, they must move beyond the limitations of their current "engagement" approaches.

The purpose of this paper is to propose a model for making the decision to launch an academic degree program at a satellite location. The remaining sections of the paper are as follows: the next section will explain the context and background of the case analysis, the following section will provide an explanation of the framework and how the framework is utilized in the case analysis, and the final section will summarize and conclude the paper.

## CONTEXT

In the fall of 2009, Kennesaw State University embarked on responding to higher educational demands of one of the fastest growing, yet underserved by higher education, counties in the state of Georgia. At the time of the creation of the partnership with Georgia Highlands College, Kennesaw State University enrolled more than 22,000 students and is categorized as comprehensive university. Georgia Highlands College was a two-year college with more than 4,000 students. Both institutions are part of the University System of Georgia. The site, the former Paulding County, Georgia courthouse and an adjacent county-owned building, was donated to Kennesaw State University and Georgia Highlands College in 2007 after a University System of Georgia Board of Regents' survey concluded that cooperative efforts between two- and four-year USG institutions would best address the state's needs for new academic programs in growing, underserved areas like Paulding County (McGahee, 2012). At that time, the Atlanta Regional Commission identified Paulding as one of the fastest-growing counties in Georgia, with 170 percent growth over the last 15-plus years. After a nearly \$1 million renovation, the 31,000 square-foot facility featuring state-of-the-art classrooms, computer and science labs, a media library, administrative offices and meeting rooms, opened for classes in January 2010 (McGahee, 2012). Each institution provided a Site Director to manage the day-to-day operations of the campus.

"The "2+2" initiative is a giant step toward the Vision we all had for the Paulding site," said KSU President Daniel S. Papp. "Our goal was to expand higher education and ultimately to make a four-year college education accessible to students in the rapidly growing but underserved Paulding community" (McGriff, 2010).

The first undergraduate degree program launched at the Paulding site was in early childhood education. Based on information provided by Georgia Highlands students, the Kennesaw State University Paulding Site Director suggested several additional majors to be analyzed for potential new 2+2 academic programs at the Paulding site, including Accounting.

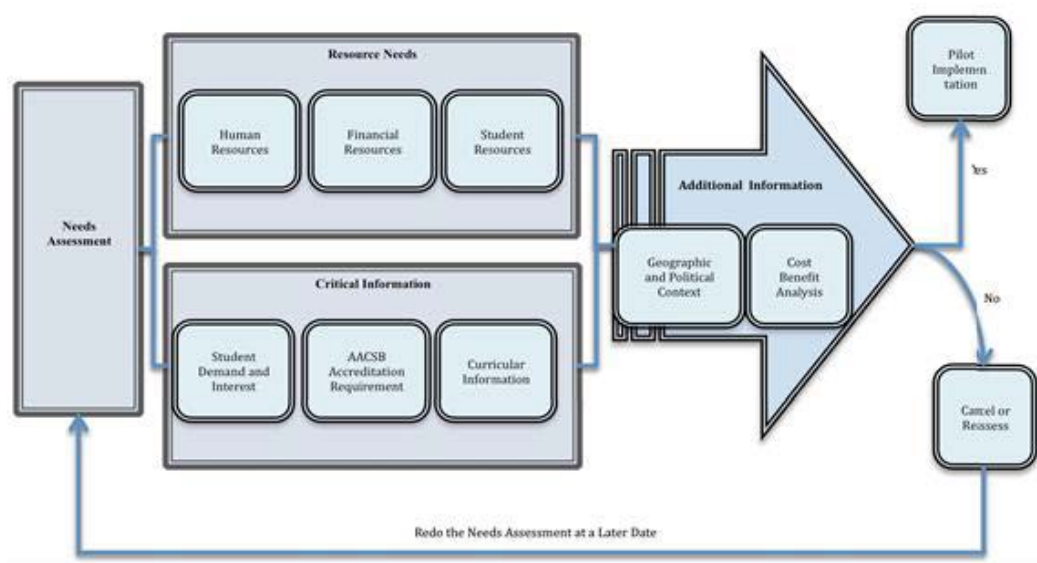
The School of Accountancy at Kennesaw State holds separate Accounting Accreditation from AACSB-International, the American Association for Colleges of Schools Business (AACSB). The School of Accountancy offers the BBA Accounting degree and minors in Accounting and Business Law at the undergraduate level, the Master of Accounting degree, and a Doctorate of Business Administration Accounting degree. The School of Accountancy has more than 1,100 majors, 31 fulltime tenure-track and 10 part-time Accounting and Business Law faculty. Given various opportunities and limited resources, it was important for the School of Accountancy to carefully assess the requirements for offering our BBA Accounting degree in the 2+2 format at the Paulding campus.

### NEEDS ASSESSMENT FRAMEWORK

Regional universities such as Kennesaw State University are in a key position to catalyze regional development outcomes by bringing together different forms of knowledge in new ways (Allison and Eversole, 2008). However, promoting regional development is not sufficient to justify launching a program at a satellite campus. The various components that may impact the decision must be identified and evaluated. A framework to organize these information and resource needs is

presented in Figure 1. The sub-components include analyzing student demand, curriculum information, student resources, student support information, accreditation information, human resources, financial resources and additional considerations such as the geographic and political context and a cost benefit analysis. The subsequent sections of this paper will elaborate on the actions and data relevant to each component by using the KSU School of Accountancy's experience with its Paulding satellite program decision as a case study.

**Figure 1: Satellite Campus Degree Program Needs Assessment Framework**



## Student Demand

One of the first major components of information needed to make a satellite program decision is whether there is student demand for the program. Initial assessments of potential 2+2 degree programs were prepared by the KSU Site Director in Paulding County. The KSU Site Director estimated student demand for potential new 2+2 degree programs by obtaining data on the number of KSU students who reside near the Paulding Instructional Site and all GHC students, and determining their current areas of study. Table 1 provides the results from the spring 2013 analysis of these two groups of students. Because GHC only has a Business Administration major, that terminology was utilized for the GHC student analysis rather than Accounting specifically. The overall results of this analysis indicated that the strongest interest was in the area of Business Administration/Accounting, followed by Early Childhood Education (2+2 program already in existence), and Psychology.

<b>Table 1: Number of Students Expressing Demand and Interest in Specific Degree Programs</b>	
KSU students residing in Paulding Spring 2013	
Degree Area	Student
School of Accountancy	74
Communication	68
Sociology and Criminal Justice	93
Early Childhood Education	87
Social Work & Human Services	33
Psychology	81
GHC Spring 2013	
Business Administration	586
Communication	91
Criminal Justice	171
Early Childhood Education	271
Human Services	73
Psychology	221
KSU and GHC Students Combined	
School of Accountancy (Business Admin)	660
Communication	159
Sociology and Criminal Justice	264
Early Childhood Education	358
Social Work & Human Services	106
Psychology	302

The Table 1 data seem to indicate a substantial pool of students who might be interested in a 2+2 accounting program at the Paulding site. To determine the actual level of interest of the GHC students, a survey was developed by the KSU School of Accountancy and administered by the KSU Paulding Site Director. Because GHC does not have an Associate Degree program in Accounting, all spring 2013 GHC Business Administration students were included in the survey, and students were allowed to indicate an interest in more than one major area. Table 2 provides the survey results from the April 2013 survey of 159 GHC students. In the survey, 78.2% of students indicated plans to pursue a BBA degree program after graduation from GHC, with 56.8% expressing an interest in an accounting major and 56.8% indicating an interest in management.

<b>Table 2: GHC Students Interest Survey in KSU 2+2 Business Program</b>		
Q1. Are you currently pursuing a Business Administration Associate's degree from Georgia Highlands College (GHC)?		
Response Options	Response Percent	Response Count
Yes	69.2%	110
No	30.8%	49
Total	100%	159
Q2. Do you plan to pursue a bachelor's degree in business administration (BBA), once you graduate from GHC?		
Response Options	Response Percent	Response Count
Yes	78.2%	122
No	21.8%	34
Total	100%	156
Q3. Please indicate your interest in one or more of the following BBA majors:		
Response Options	Response Percent	Response Count
Accounting	56.8%	79
Economics	12.2%	17
Finance	28.8%	40
Information Systems	17.3%	24
Management	56.8%	79
Marketing	29.5%	41
Total		139

In the fall of 2013, the School of Accountancy created a follow-up survey to further assess student demand and interest in pursuing the BBA Accounting degree, and an Accounting career, once the Associate's Degree in Business Administration is completed. Table 3 indicates that of the 71% (N=363) of respondents who indicated interest in pursuing a face-to-face BBA in Business Administration, 16.6% of those are specifically interested in the BBA Accounting. A question directed only to those students who plan to pursue the BBA degree indicates that 31% are specifically interested in the accounting undergraduate degree.

<b>Table 3: GHC Students Interest Survey in Pursuing in a BBA in Business Programs</b>				
Q1. What is your educational interest (or major)?				
Response Options	Pa	Onli	T	%
Accounting	49	20	6	19%
Business Administration	14	25	1	47%
General Studies	34	11	4	12%
Other	67	12	7	22%
TOTAL RESPONSES	29	68	3	100%
Q2. Are you currently pursuing a Business Administration associate's degree from GHC?				
Response Options	Pa	Onli	T	%
Yes	17	43	2	61%
No	12	12	1	39%
TOTAL RESPONSES	30	55	3	100%
Q3 Do you plan to pursue a bachelor's degree in Business Administration (BBA) after you graduate from GHC?				
Response Options	Pa	Onli	T	%
Yes	17	39	2	60%
No	12	16	1	40%
TOTAL RESPONSES	29	55	3	100%
Q4. If yes, are you interested in pursuing your BBA with a major in Accounting?				
Response Options	Pa	Onli	T	%
Yes	74	25	9	31%
No	14	14	1	51%
No Answer	57	0	5	18%
TOTAL RESPONSES	27	39	3	100%

Table 4 summarizes the specific accounting career options that GHC students are interested in pursuing after completing the BBA in Accounting. Corporate or management accounting careers and public accounting (assurance services, taxation, or advisory services) were identified as the most popular accounting career options.

<b>Table 4: Student Accounting Career Interest</b>				
In which areas of accounting do you have a career interest (check all that apply)?				
Response Options	Paper	Online	TOTAL	%
Public Accounting/Auditing and Assurance	42	12	54	12%
Public Accounting/Taxation	44	7	51	11%
Public Accounting/Business Advisory (Consulting) Services	59	11	70	16%
Government or Non-Profit Accounting	28	9	37	8%
Corporate or Management Accounting	90	15	105	24%
Internal Auditing	20	10	30	7%
Tax Preparation or Enforcement	24	4	28	6%
Fraud Examination or Forensic Accounting	31	4	35	8%
IT (Information Technology) Auditing	30	4	34	8%

Table 5 examines student interest in actually taking classes at the Paulding Instructional Site. Of the 328 responding GHC students, 125 (38%) indicated that they would be interested in enrolling in a 2+2 KSU/GHC Accounting degree program located at the Paulding Instructional Site. The survey was administered to all GHC Business Administration students in the spring of 2013. Only 14% are definitely interested in evening classes only while 45% are interested in day classes only. The remaining 41% are indifferent to whether the program is day or evening.



<b>Table 5: Student Interest in taking classes at the Paulding Site</b>				
Q1. If a two-year KSU BBA-Accounting degree program were offered at the KSU/GHC Paulding Instructional Site in Dallas, Georgia, would you be interested in enrolling in such a program after the completion of your associate's degree from GHC?				
	Pape	Online	TOTALS	%
Yes	98	27	125	38%
No	191	12	203	62%
TOTAL RESPONSES	289	39	328	100
Q2. What time of day are you most willing to take classes at the KSU/GHC Paulding Instructional Site in Dallas, Georgia?				
	Pape	Online	TOTALS	%
Daytime classes only	120	30	150	45%
Evening classes only	31	16	47	14%
Either day or evening classes	116	19	135	41%
TOTAL RESPONSES	267	65	332	100

Table 6 indicated anticipated graduation dates of GHC student respondents.

<b>Table 6: GHC Students Anticipated Graduation Dates</b>				
What is your anticipated graduation semester for your Business Administration associate's degree from GHC?				
	Paper	Online	TOTALS	%
Fall (Dec, 2013)	39	5	44	15%
Spring (May, 2014)	95	15	110	37%
Summer (Aug, 2014)	111	32	143	48%
TOTAL RESPONSES	245	52	297	100%

### Curriculum Information and Innovation

A second major area to examine when considering launching a program at a satellite campus is the curriculum. One question is when and how often the various courses can and should be offered. If the program offering is a 2+2 program, additional complexity arises because the courses that will fulfil the requirements of the first half of the Bachelor's degree program are being offered by another university. If the Associate's degree program requires courses that are not needed for the Bachelor's degree, or does not include courses that are required for the Bachelor's degree, the problem of how to deal with those issues without requiring the students to take numerous extra courses must be solved.



Georgia Highlands College offers an Associate of Science in Business Administration degree program that fulfills most of the requirements for admission into the Coles College of Business BBA degree program. A review of the GHC Associate of Science requirements by the Associate Dean of Undergraduate Programs in the KSU Coles College of Business suggests that GHC students are currently not required to enroll in MATH 2040, Applied Calculus, which is a requirement for admission into the Coles College of Business BBA degree program. This information was communicated to the Associate Vice President for Curriculum, who included it in her report to the Board of Regents on graduation issues that need to be addressed in order to launch additional KSU/GHC 2+2 degree programs.

The curriculum and draft course information was developed as a cohort program, meaning that all students of an entering class would take their KSU courses together and that courses would be offered once in a cohort cycle. Each cohort would begin during fall semester. All cohort students would need to be officially admitted to the Coles College Undergraduate Professional Program prior to registering for any KSU upper-division business courses at the Paulding Instructional Site. Assuming that GHC applicants to the 2+2 program can meet all requirements for admission into the Coles College and that students would enroll in a full-time cohort program, a four semester course sequence is listed in Table 7 and Table 8:

<b>Table 7: Year 1 Schedule of Courses: BBA-Accounting</b>			
Fall Year 1 (Term 1)	Credit Hours	Spring Year 1 (Term 2)	Credit
ACCT 3100	3	ACCT 3300	3
ACCT 3200	3	ACCT 4050	3
MGT 3100	3	MGT 3200	3
MKTG 3100	3	ECON 3300	3
FIN 3100	3	IS 3100	3
Total Hours	15	Total Hours	15

<b>Table 8: Year 2 Schedule of Courses: BBA-Accounting</b>			
Fall Year 2 (Term 3)	Credit Hours	Spring Year 2 (Term 4)	Credit
ACCT 4150	3	ACCT 4300	3
ACCT 4xxx(elective)	3	MGT 4199	3
ACCT 4xxx(elective)	3	ACCT 3398(internship)	9
Non-Business elective	3		
Non-Business elective	3		
Total Hours	15	Total Hours	15

The advantage of using the cohort format is that it forces standardization of course offering and course sequencing, and facilitates efficient scheduling of faculty. This schedule of courses includes nine credit hours of accounting internship credit that would be utilized to satisfy the Business Electives requirement of KSU's BBA-Accounting curriculum. It is not known at this time whether sufficient internship opportunities would be available to the cohort students. Additionally, in order to receive nine credit hours of internship credit, the students need to work full-time for the semester and meet KSU's 3.0 GPA requirement in order to receive internship credit.

Because of the requirements for entry into and success in the accounting profession, the preferred emphasis for a proposed 2+2 accounting program would be to prepare students for entry into specialized graduate degree programs in accounting such as the Master of Accounting degree program at Kennesaw State University. In addition to the examination and experience requirements to become a Certified Public Accountant in the state of Georgia, CPA licensure also requires 150 semester hours of college credit and 30+ credit hours of upper-level accounting courses. Public accounting firms have expressed a preference that students obtain the 150 semester hours through specialized graduate degrees in accounting or taxation rather than by taking additional undergraduate courses. Those students who do not pursue a graduate degree in accounting would be prepared for entry-level positions in business or other organizations and graduate study in other business disciplines, law, or other areas.

### **AACSB Accreditation Information**

Kennesaw State University holds both business and accounting accreditation from AACSB International, the premier global accrediting agency for business and accounting degree programs. A potential 2+2 accounting degree program at the Paulding Instructional Site would be considered a “second location” by AACSB, and the second location would need to meet all of the standards for AACSB accreditation that are met by the programs on the main campus. In accounting, AACSB standards include specific standards addressing Accounting Strategic Management and Innovation, Accounting Participants (students, faculty, and professional staff), Accounting Learning and Teaching, and Accounting Academic and Professional Engagement and Professional Interaction. Additional research of how these services would be provided to students at the Paulding location would be necessary in order to determine the extent of student services that would need to be replicated at the Paulding Instructional Site.

### **Student Resources and Support**

In the early stages of the needs analysis, the following information was provided to the School of Accountancy regarding the human and physical resources available at the Paulding Instructional Site:

<b>Table 9: The following spaces at the Paulding Site are shared by Kennesaw State University and Georgia Highlands College:</b>
2 computer labs
1 digital library (computers only, no physical books)
7 classrooms
1 wet lab
1 lab prep room
2 student lounges
20 faculty/staff offices
Georgia Highlands College employs a staff that includes the following positions: a Campus Dean, an Enrollment Management Specialist, an Administrative Assistant, a Financial Aid Coordinator, a Campus Safety Officer, an IT Specialist, a Testing Coordinator, a Tutor, a Librarian, a Recruiter, an HR Manager, an Academic Advisor, a Student Life, a Disability Specialist, and a Counselor. Kennesaw State University employs staffs that include a Site Director/Faculty-In-Residence, an Educational Outreach Coordinator/Faculty-In-Residence, and an Administrative Associate.

There is no bookstore currently located on the site. Student parking is located in surface lots adjacent to the building. The digital library is scheduled to be moved into the old courthouse (next to our building) sometime in 2013. At that time, it will become both a physical and digital library.

KSU and GHC are currently assessing plans to expand into the Winn Building, which is located across the street. That expansion would probably give us another 4-5 classrooms and a chemistry lab.

In order to launch a successful accounting 2+2 program at the Paulding Instructional Site, computerized classrooms are required for ACCT 3300 and IS 3100. A computerized classroom is recommended for ECON 3300. During the needs assessment of physical resources, it was determined that the existing Paulding computer labs can be used for these courses. Additionally, tutoring is available several days per week on the KSU main campus for students enrolled in ACCT 3100, FIN 3100, and ECON 3300. A modified version of tutoring, perhaps including

group and individual tutoring sessions, would need to be available at the Paulding Instructional Site. Other student resources that would need to be available to students at the Paulding Instructional Site include academic advising, career and graduate school advising, access to the three accounting student organizations, access to the two accounting career fairs held on the main campus each year, financial aid advising, and writing center support as needed.

It is recommended that a dedicated or shared professional staff member support a 2+2 accounting program at the Paulding Instructional Site. This staff member would be responsible for assisting GHC students with the application process for admission to the Coles College of Business, providing academic and accounting career advising, coordinating access of cohort students to student organizations and career development activities, providing support to accounting internships, coordinating tutoring activities, coordinating any scheduling issues, supporting accounting and business faculty who teach in the program, and serving as a liaison between the Paulding Instructional Site and school and college leadership.

### Financial and Other Resources

If a new cohort begins each fall semester, then up to eight accounting courses will need to be offered at the Paulding Instructional Site each academic year. This assumes that each cohort would start with only one “class” of students, with the number of students in the class defined by classroom size. This is the equivalent of one to two additional accounting faculty members beyond the current capacity. Because of AACSB requirements, the equivalent of at least one full time faculty member would need to be a terminally qualified and research active faculty member. Additional faculty capacity would also be required to deliver the 21 credit hours of Upper Division Business Core and Information Technology Requirement courses in the disciplines of economics, finance, and marketing, management, and information systems. A summary of salary requirements to expand accounting degree offerings to the Paulding Instructional Site is listed in Table 10.

Table 10: Salary Requirements-Years 2+ (multiple cohorts)		
Title	Full-Time or Part-Time	Estimated Salary
Assistant Professor of Accounting (new hire)	FT	\$135,000
Lecturer of Accounting (new hire)	FT	70,000
Instructor of Accounting (2 courses)	PT	5,400

Assistant Professors or Lecturers (expanded capacity in other business disciplines)	FT	70,133
Professional Staff Coordinator (new hire)	FT	38,000
Total:		

Table 11 below lists only those salary resources that would be required in year one of the program, when only the first year of the curriculum would be offered.

<b>Table 11: Salary Requirements-First Year of BBA-Accounting 2+2 Program</b>		
Title	Full-Time or Part-Time	Estimated Salary
Assistant Professor of Accounting (new hire)	FT	\$135,000
Assistant Professors or Lecturers (expanded capacity in other business disciplines)	FT	35,067
Professional Staff Coordinator (new hire)	FT	38,000
Total:		

### **Additional Considerations**

The two primary additional considerations that should be examined in the satellite programs are geographic and political considerations and a cost/benefit analysis. Discussed below are these two issues and other issues that should be carefully considered in the implementation of the framework and decision model.

The geographical and political context of the potential satellite location must be considered by the senior level administrators, deans, and other stakeholders. Politically, there may be state legislators or other influential individuals or community leaders who desire to increase higher educational offerings in their respective areas of the state. These leaders may even be willing to provide special incentives for their areas to be considered for new college programs. The framework proposed in this paper can be beneficial in responding to these requests because it allows for a comprehensive examination of need, student preferences, and available resources. For example, even in cases where financial and facility resources are being provided such as the donated buildings in the present case analysis, the other aspects of the framework should be implemented prior to making a decision to launch a pilot program.

A final important political consideration is whether other institutions are interested in expanding into the same area. In the current case analysis, another four year university within the University System of Georgia expressed interest in new degree programs in Paulding County, though extensive communication with that university eventually led to them providing written support for KSU's plan to expand our 2+2 degree programs with GHC in Paulding County. Geographically, census estimates of past and potential population growth in the area of the potential satellite locations should be carefully examined to ensure that student demand is not only present, but has the potential for growth. Other geographic issues include current and future state transportation plans that support easy access to the satellite location, the availability of community resources such as restaurants to support both day and evening students, and the willingness of current faculty to travel to the satellite location. Finally, political and geographic issues to be considered are the existence of similar academic programs at institutions outside of the university system, accreditation issues, and the strategic placement of the satellite program in the mission of the home college or university.

In addition to the salary and facility resources that are required to launch a satellite location, there are other cost issues that should be included in a thorough cost benefit analysis. Additional cost issues include reimbursing faculty members for the travel to and from the satellite location, the potential impact on academic programs at the home site, the allocation of occupancy costs and overhead costs at the satellite location, the cost of student services that should be provided to students at the satellite location, and how these services can be provided in a modified way as the program builds. In the case analysis, the reimbursement costs for faculty and staff travel were not provided by the university and became an additional cost to the School of Accountancy and the other academic units that offered business courses at the Paulding Instructional Site. Reassigning faculty from the main campus to the Paulding pilot program required assigning multiple terminally qualified faculties in order to meet accreditation requirements, even though the Paulding courses had much smaller enrollment levels. The occupancy and overhead costs were absorbed by Kennesaw State University per their joint contract with Georgia Highland College. Because of the separate AACSB-International Accounting Accreditation, it was very important to provide a similar level of student services to the Paulding students, and modified methods to provide these services have been drafted or implemented. Because funding was not available for a new full-time staff member, the plan was modified to have an accounting faculty member provide limited advising services, a School of Accountancy administrator has conducted information sessions and advised students regarding the enrollment process, and students are allowed to order their books online from the KSU bookstore for home delivery.

The cost benefit analysis should also thoroughly analyze the potential benefits of the new satellite program, including potential benefits to the students enrolled in the satellite program, the university, the home academic unit, and other academic units that offer courses at the satellite location in order to support the program. Students benefit by having desired academic programs available closer to home offered by established, accredited universities. Because of classroom size constraints, the Paulding students will have smaller classes with a maximum enrollment of 24 to 30 students, while the same courses on the main campus have enrollment capacities of approximately 55 students. The home academic unit (School of Accountancy) and other academic units that offer courses at the satellite location potentially benefit by implementing initiatives such as the cohort program delivery method and the requirement of experiential education with a smaller group of students in order to test the effectiveness of the initiatives for further expansion onto the main campus. Many of these benefits may justify the program to the university even if it is not highly profitable, including serving as the approved university to offer academic 2+2 programs in a region with a predicted growing population and having the opportunity to establish contacts with government officials, local community leaders, and hiring recruiters in the region.

The implementation of the program originally as a pilot program allows for the analysis of several other outstanding issues as the framework is being vetted. The list below includes several additional issues that have been analyzed in the first year of the KSU/GHC BBA Accounting 2+2 pilot programs:

- There are faculty and staff capacity limitations with the existing faculty and staff of KSU's School of Accountancy. Additional faculty and staff will be needed in order to launch a successful cohort program.



- Most School of Accountancy faculty members teach in a specialized area of accounting (e.g. financial accounting, taxation, auditing, accounting information systems) rather than teach across several areas. Therefore, it is likely that many different accounting faculty members would be required to teach in the proposed 2+2 program at the Paulding Instructional Site.
- The preferred program and individual course delivery formats (all face-to-face vs. some online or hybrid courses) need to be explored.
- It is unclear whether existing main campus KSU students would be allowed to attend selected classes at the Paulding Instructional Site, which does not seem to align with a true cohort format.
- The timing of application to the Coles College needs to be explored further.
- While several innovative program ideas can be explored with a small cohort, such as required internship credit, the program would need to allow for enough flexibility to permit students to complete the degree requirements in a reasonable time frame.
- It is unclear whether summer courses should be included in the draft schedule, though faculty believe that this is the only way for the program to be complete in two years at KSU.

## CONCLUSION

The exploration of establishing and offering a business degree program at a satellite campus requires several factors to be considered. Many of the factors are relatively direct and specific when considering launching a new program. Human and financial resources are examples of such factors, which are often simpler to predict based on recognized student demand and interest. Consequently, identifying student demand and interest can vary but are the most important factors to take into consideration. Proceeding without an understanding of the potential demand for a particular degree program would be similar to building a field of dreams with the hope that the students will come once the program is built and resources are in place.

In summary, the Framework for identifying factors to consider when implementing a satellite campus degree program include both resources needed in addition to the critical information to discern whether to move forward to implement a pilot program. The resource needs analysis include exploration of human resources, financial resources and student resources. These components are dependent on each other. Critical information components focus on student demand, accreditation concerns, and curricular information. The resource needs analysis and the critical information analysis is then cross checked for feasibility based on geographical location, political context and determining a satisfactory cost benefit analysis. If the analyses are primarily within a comfortable range of satisfaction, then every effort should be put forth to launch a pilot program. If the analyses are not favorable, then launching the program at the present time should be abandoned or revisited within a year or two.

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# TRADITIONAL MBA ADMISSIONS CRITERIA AND GRADUATE SCHOOL SUCCESS: THE IMPORTANCE OF GMAT SCORES AND UNDERGRADUATE GPA AS PREDICTORS OF GRADUATE BUSINESS SCHOOL PERFORMANCE

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## ABSTRACT

*This study addresses predictors of graduate success at the MBA level. Most previous research has concentrated on overall GMAT score and undergraduate GPA as predictors. This limited study concentrates on the components of the GMAT (quantitative, verbal, writing) and their roles in predicting success. Results are significant. First, while writing and verbal are positively correlated, there is a statistically significant inverse relationship between the quantitative and verbal scores. Second, while the GMAT verbal and writing scores demonstrate a statistically significant ( $p < .01$ ) correlation with the three success variables (number of A's, number of C's, and graduate GPA), the GMAT quantitative score fails to demonstrate a significant ( $p = .05$ ) correlation with any of the three success variables. Finally, all three GMAT components and undergraduate GPA were significant in predicting graduate school success with at least one of the success measures we used in this study. One implication of this study is that schools might consider using the component GMAT scores, including the writing score, as additional indicators of potential success in the MBA program, especially for those applicants who are "on the bubble" of admissibility.*

## INTRODUCTION

The traditional approach that business schools have used in making decisions regarding admission into their graduate programs is to employ a formula that considers the overall GMAT score and undergraduate GPA (UGGPA) of the applicant, with prescribed minimum formula scores for conditional or unconditional admissions (Braunstein, 2002; Hedlund, Wilt, Nebel, Ashford, and Sternberg, 2006; Kass, Grandzol, and Bommer 2012; Loucopoulos, Gutierrez and Hofler, 2007; Ragothaman, Carpenter, and Davies, 2009; Yang and Lu, 2001). In addition to the formula minimums, schools generally also establish minimums for the formula components (overall GMAT score and UGGPA). Many schools also consider additional admissions criteria such as (a) amount and quality of work experience (Braunstein, 2009; Deis and Kheirandish, 2010), (b) strength of references (Fairfield-Sonn, Kolluri, Singamsetti & Wahab, 2010; Ragothaman, Carpenter, & Thomas, 2009; Rim, 1976), (c) maturity of the applicant (Fish and Wilson, 2009; Truitt, 2002, as cited in Braunstein, 2006), (d) strength of the undergraduate school (Fish and Wilson 2007), (e) communication skills of the applicant as exhibited by a written essay or an interview (Abbasi, Siddiqui, and Ain Azim 2011), and (f) previous success in graduate work.

## LITERATURE REVIEW

The research has been mixed to date, but generally supports the traditional approach (formula that includes the overall GMAT and the UGGPA) for graduate admissions decisions along with consideration of other criteria. Previous research has been very limited (or non-existent) in considering the relationship between the overall GMAT score and the more specific GMAT component scores (verbal, quantitative, writing) with each other or with undergraduate GPA, and has been somewhat limited in considering the relationship between these measures and graduate business school success.

Kass, Grandzol, and Bommer (2012) supports the traditional approach to MBA program admission; however, further research discovered that GMAT failed to predict essential skills such as “communication, teamwork, decision making, leadership initiative, and planning and organizing” (p. 290). A meta-analysis of 273 studies found that on performance in both verbal and quantitative sections, the GMAT total score was the best predictor of graduate school success (Talento-Miller & Rudner, 2008). In determining the variables most closely related to student academic success and where the MBA student’s overall GPA was the dependent variable, Yang and Lu (2001) found the GMAT quantitative and GMAT verbal and undergraduate GPA were the most important predictors of student graduate performance in a study of 395 usable participants. An additional study indicated that waiving the GMAT demonstrated a marginally significant difference in GPA of MBA graduates (Fairfield-Sonn, et al, 2010); that is, those whose GMAT was waived, finished the MBA with marginally better grades.

## METHODOLOGY

This preliminary research effort provides an examination of those relationships. Objectives of the study are expressed as three research questions:

1. Are the component GMAT exam scores (quantitative, verbal, and writing) correlated? If so, what is the nature of that correlation?
2. Do correlations exist between the GMAT overall exam score or the component GMAT exam scores (quantitative, verbal, and writing) with undergraduate GPA? If so, what is the nature of that correlation?
3. (a) Do correlations exist between selected variables (GMAT quantitative score, GMAT verbal score, GMAT writing score, GMAT overall score, undergraduate GPA) that may serve as graduate school admissions criteria and selected variables (graduate GPA, number of A’s earned, number of C’s earned) that may serve as indicators of success in graduate business school. (b) Is there a causal relationship between these admissions criteria and graduate business school success?

We address the research questions by analysis of Pearson correlations and regression analysis. Student data is gathered for the analysis from students ( $n = 212$ ) enrolled in the MBA programs (onsite and online) of a mid-sized AACSB accredited public university over a period of four and a half years. The study includes students who graduated, as well as some current students and some students who dropped out of the program. Current students and students who dropped out are excluded if they completed fewer than three classes. Statistically significant correlations, if any, indicate direct positive or negative relationships between the focal variables. Note, however, that significant correlations are a necessary but not sufficient condition for the inference of causality. Causal analysis is beyond the scope of this limited preliminary study.

Admissions criteria in place varied somewhat for students included in the study, since the criteria have evolved at the university over the past few years. During the majority (latter part) of the period under study, the university required the GMAT and applied a formula using the traditional factors (overall GMAT and undergraduate GPA), while taking other factors (such as work experience, letters of reference, GMAT writing score, quality of undergraduate institution, age of the undergraduate degree) into consideration. Work experience is required for students in the online program but not for onsite students. During this latter period of the study, the only exception to the GMAT requirement was for prospective students who had already completed a graduate degree. We should note that a few students who were enrolled during the period (and included in the study) were admitted earlier under somewhat different admissions criteria that may have allowed limited enrolment for students with no GMAT scores, or with lower GMAT scores or lower undergraduate GPAs.

The variables used in the study are fairly self-explanatory, but we will describe them here because universities differ in their calculation and use of these scores for admissions purposes. For purposes of this study, GMAT verbal score, quantitative score, and overall score reflect the scores from the GMAT test submitted for that student with the highest overall score. The GMAT overall score is a composite of the verbal and quantitative scores that is calculated and provided to the university by the testing service. The GMAT writing score is not included in the GMAT overall score and is the subjective grade (provided to the university by the testing service) for the writing sample that is included on the GMAT exam. Undergraduate GPA is the calculated GPA from all undergraduate work completed prior to completion of the degree at all institutions attended. Note that this is often different from the stated undergraduate GPA from the last university attended. Graduate GPA is the calculated GPA for all graduate coursework completed as of the end of the period under study, but does not include coursework that was transferred in. For students who had graduated, GPA includes all of their graduate courses at the university. For others, obviously, this would only include courses that they completed to date. Similarly, number of C's earned in the program and number of A's earned in the program reflect all graduate coursework completed at the university as of the end of the period included in the study.

## RESULTS

Descriptive statistics for the research variables are calculated and provided in Table 1. Per results of the Pearson correlation analyses (Table 2), the GMAT exam scores (quantitative, verbal, and writing) are indeed statistically significantly correlated. However, the correlations are not all in the positive direction. In other words, prospective students who score high on one portion of the exam are likely to score lower on at least one of the other two portions of the exam. Specifically, the verbal score and the writing score are both statistically significantly inversely correlated with the quantitative score. The verbal score and the writing score are positively correlated.

Continuing with the examination of selected admissions criteria and proceeding to the second research question, results demonstrate statistically significant correlations (Table 3) with undergraduate GPA for the overall GMAT score and for two of the three component GMAT exam scores (writing score and verbal score). The correlation analysis between undergraduate GPA and the GMAT quantitative score demonstrates no statistically significant result.

Results are mixed in the analyses of correlations between the admissions criteria (actually proxy measures for graduate business school preparedness) and the three measures of graduate business school success. Obviously, practitioners and researchers would expect significant correlations between the criteria and graduate business school success. We expect positive admissions criteria correlations with graduate GPA and with number of A's earned in the program, and inverse correlations with number of C's earned in the program. Results of this study do demonstrate statistically significant correlations (Table 4) in most, but not all, of the analyses. The GMAT quantitative score is particularly problematic, failing to demonstrate a significant ( $p=.05$ ) correlation with any of the three success variables. As expected, GMAT verbal score is significantly correlated with the success measures. In spite of the non-significant results the quantitative score noted above, statistically significant correlations are indicated for the overall score (which is actually a composite of the quantitative and verbal scores) with all three of the success variables used in this study. Notably, the GMAT writing score (which is not a part of the traditional admissions formula) demonstrates strong and statistically significant correlations with all three success variables used in this study.

Addressing part "b" of the third research question, we followed the correlation analyses with regression analyses investigating the predictability of the two traditional basic admissions criteria (undergraduate GPA and overall GMAT score) for each of the three graduate school success variables (Table 5). All three analyses demonstrate statistically significant ( $p<.01$ ) results, but with low r-squared values (indicating other important variables that were excluded from the analysis). Undergraduate GPA appears, per these results, to be important criteria in predicting higher levels of graduate school success in terms of graduate GPA and number of A's. Overall GMAT score, on the other hand, assists in predicting the number of C's in graduate school.

Finally, considering the component GMAT scores individually, we conclude the investigation of causality by examining regressions of the four admissions criteria (undergraduate GPA, GMAT writing score, GMAT quantitative score, and GMAT verbal score) as independent variables for each of the three graduate school success variables. The regression models are all indicated to be significant in predicting graduate school success (Table 5). Results are similar to results for the first set of regression results, obviously with added information regarding the component GMAT scores. The GMAT writing score (which is not included in the calculation of the overall GMAT score used in the first set of regressions), per these results, appears to be the most accurate GMAT supplied criteria to predicting graduate school success in terms of graduate GPA. The verbal and quantitative scores are both important predictors of the number of C's. However, again, low r-squared values suggest the omission of important admissions criteria from the analyses.

Interestingly, though the quantitative GMAT score fails to demonstrate a strong direct correlation with the success variables when considered alone, the regression analyses (Table 5) reveal that the quantitative score component joins the verbal score component as significant predictors of the number of "C's" in the program. The overall GMAT score (combined from the verbal and quantitative scores) is significant as are the verbal and quantitative components individually.

## CONCLUSIONS

In support of practice and previous research, our results indicate (Table 3) statistically significant relationships between the two traditional predictors (overall GMAT score and undergraduate GPA) of graduate business school success, and also (Tables 4 and 5) between these two predictors and our three measures of graduate school success (graduate GPA, number of “A’s” earned, number of “C’s” earned). Certainly one conclusion from this research is that the traditional admissions criteria employed by many programs are appropriate, at least in part, in making graduate school admissions decisions. The overall GMAT score and undergraduate GPA are indeed related to (and predictors of) graduate business school success.

Interestingly, an additional conclusion from our research is that each prospective graduate student will likely perform very differently on the different portions of the GMAT exam. While the verbal and writing scores from the GMAT exam are positively correlated, as noted above, the quantitative score is actually inversely correlated with both of the other scores (Table 2). Further, the verbal, quantitative, and writing scores relate differently to the three academic success variables included in this study (Tables 4 and 5). These results suggest graduate business school programs would do well to consider all three scores individually in making the admissions decision, in addition to the overall GMAT score and the undergraduate GPA. The writing score (along with undergraduate GPA) is indicated by this study to be the particularly important GMAT component in the regression analyzing success in terms of graduate GPA.

Our results and the conclusions outlined above suggest implications for those responsible for graduate business program admissions decisions. Summarizing from above, the overall GMAT score and undergraduate GPA should be employed, with additional attention given to the component GMAT scores. The writing score in particular, since it is not included in the overall GMAT score, should be given specific attention by admissions committees. The score is indicated to be related to academic success for the students included in this study and could easily be applied by admissions committees in addition to the traditional admissions criteria for those applicants who are “on the bubble” in terms of their admissibility.

Finally, the results suggest that universities use caution if applying the traditional admissions criteria without consideration of other factors. The low *r*-squared values demonstrated in this study imply that additional admissions criteria excluded from the study are also important in predicting success. The more non-traditional criteria outlined in the introduction above, for example, could be just as important (or more important) as the traditional criteria in predicting success in MBA programs.

## LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

As stated above, students included in this study are limited to enrolled students in the online and onsite programs at one particular university over a limited period of time. Results of the study provide guidance to practitioners in making admissions decisions for similar MBA programs (AACSB-accredited, general MBA), and possibly for other graduate business programs. A suggestion for future research is to further test the results of the study by extending it to a variety of other programs, with differing admissions criteria.



Some enrolled students were excluded from the analyses. Students who had previously successfully completed a graduate degree (either master's level or doctorate) were not required to submit official GMAT scores or, in some cases, official undergraduate transcripts. Other than descriptive performance measures, these students were omitted from the study. Students were also excluded from the study if they left the program prior to the completion of three classes. The authors do not know the proportion of these students who were failing versus the proportion that simply had no interest in completing the program or left the program for other reasons.

Prospective students who were denied admission (and students who chose not to attend after being accepted), of course, are also not included. The authors do not know how many, if any, of these students would have succeeded had they been admitted.

For almost the entire period included in this study, the admissions criteria of the programs did not allow limited enrolment in classes contingent on meeting admissions criteria for standard enrolment at a later time (a common practice at many institutions). A limitation of the study, then, is that the authors include very few students with low (or non-existent) traditional admissions scores. Essentially (as explained earlier) all students included in the study were formally admitted; clearly a determination had been made that they should be successful. Future research could extend the study to include students with limited enrolment status.

Several admissions criteria were excluded from this preliminary study. Among the excluded criteria are: amount and quality of work experience, strength of references, maturity of the applicant, strength of the undergraduate school, and previous success in graduate work. Future studies could examine the direct relationship between these admissions criteria and graduate business school success, and could also examine the additional criteria in conjunction with GMAT scores and undergraduate GPA.

Since some programs accept the GRE as an alternative to the GMAT, future researchers could test how the two tests compare as predictors of graduate business school success.

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**TABLE 1**  
**Descriptive Statistics**

	Mean (N) Std Dev
GMAT Verbal Score	27.14 (203) 7.39
GMAT Quantitative Score GMAT Writing Score GMAT Overall Score	30.04 (203) 8.36
Undergraduate GPA Graduate GPA	4.33 (203) .922
Number of C's earned in program	488.2 (203) 73.47
Number of A's earned in program	3.19 (207) .464
	3.48 (186) .549
	.38 (212) .668
	4.51 (212) 3.28

**TABLE 2**  
**Pearson Correlation Analyses Results – Research Question 1**  
**Coefficients (Significance)**

	GMAT Quantitative Score	GMAT Writing Score
GMAT Verbal Score	-.157 (.025) N=203	.479 (.000) N=203
GMAT Quantitative Score		-.156 (.026) N=203

**TABLE 3**  
**Pearson Correlation Analyses Results – Research Question 2**  
**Coefficients (Significance)**

	Undergraduate GPA
GMAT Verbal Score	.182 (.009) N=203
GMAT Quantitative Score	.013 (.850) N=203
GMAT Writing Score	.199 (.004) N=203
Overall GMAT Score	.158 (.024) N=203



**TABLE 4**  
**Pearson Correlation Analyses Results – Research Question 3**  
**Coefficients (Significance)**

	Graduate GPA	Number of C's Earned in	Number of A's Earned in
GMAT Verbal Score	.157 (.036) N=179	-.191 (.006) N=203	.149 (.034) N=203
GMAT Quantitative Score	.030 (.690) N=179	-.116 (.098) N=203	.055 (.434) N=203
GMAT Writing Score	.248 (.001) N=179	-.168 (.016) N=203	.163 (.020) N=203
Overall GMAT Score	.156 (.037) N=179	-.242 (.001) N=203	.157 (.026) N=203
Undergraduate GPA	.254 (.001) N=181	-.047 (.506) N=207	.208 (.003) N=207

**TABLE 5**  
**Tests for Main Effects – Results of Regression Analyses**  
**Standardized Regression Coefficients (Significance) and ANOVA Table Results**

	Dependent Variables		
	Graduate	Number of C's in the	Number of A's in the
TRADITIONAL ADMISSIONS CRITERIA			
Undergraduate GPA	.241 (.001)	-.011 (.878)	.201 (.004)
Overall GMAT Score	.122 (.096)	-.240 (.001)	.125 (.073)
F			
Adjusted R <sup>2</sup>			
SELECTED ADMISSIONS CRITERIA			
Undergraduate GPA	.213 (.004)	.006 (.931)	.185 (.009)
Verbal GMAT Score	.037 (.654)	-.161 (.042)	.080 (.313)
Quantitative GMAT Score	.060 (.410)	-.160 (.023)	.081 (.247)
Writing GMAT Score	.197 (.002)	-.117 (.118)	.101 (.002)
F			
Adjusted R <sup>2</sup>			



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# ETHICS AND MORALITY: WHAT SHOULD BE TAUGHT IN BUSINESS LAW?

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## ABSTRACT

*Ethics and ethics laws have become key topics in Business Law courses. Often the topics of ethics and morality are commingled and confused with each other; however, it is important to understand the differences between the two and to address them appropriately in Business Law courses. Ethics is a set of rules or codes that a group or society abides by. These rules are sometimes used to create laws. Morality, on the other hand, tends to be personal. The ideals may be learned from family, friends, and church, but the application is personal. This paper looks at the major ethical theories and the major moral theories. The ethics theories look at how rules and codes are created for a society and then applied to an individual, but those rules are followed by the entire group. The moral theories look more at personal beliefs and the individual application of a set of ideals. Because morality is focused on personal beliefs it is difficult, if impossible, to teach in a classroom as the professor would have to address the ideals of each individual student to fairly represent everyone. Ethics, on the other hand, lends itself to classroom teaching, especially in a Business Law course, as it addresses the rules and codes of an entire group or society. The business culture that we live in reinforces this idea as the laws and statutes that have been passed are based on the ethics of society as a whole or a group as a whole. None of the laws that have been passed address the ideas or theories of morality. Several cases, popular in Business Law survey courses, are great examples of when morality and ethics cross over. It is important for the professor in these situations to control the dialogue and focus on the ethics and laws of the cases and not on the morality of the cases.*

## INTRODUCTION

Ethics has been a hot topic in the business world for many years as examples of ethics gone wrong continue to put the topic in the lime light, both in the media and in business schools. The AACSB has found ethics to be important enough to the education of business students that it requires ethics be a part of business education and the government has found that ethics is essential (Garner, 1994) to a successful business environment and has legislated ethical behavior in businesses. In addition, we as stake holders, now more than ever, are demanding that the businesses we deal with act ethically. That being said, ethics is an obvious topic in a Business Law course, but often morality is comingled or, worse yet, confused for ethics. These two topics are quite different and have very different implications in the classroom. Educators must clearly understand the differences and determine how to address these topics appropriately in courses.

As a professor, it is apparent that students are often confused between morality and ethics and while they usually have a strong sense of their morals, or at least those of their parents, they often don't understand ethics, how it is different from morality, and why it matters. It has also become clear that we as educators are often confused too. To teach ethics effectively we must understand both ethics and morality and how they are different. This paper will look at the difference between ethics and morality, how the two are addressed in business, how the two are addressed in law and how we should address the topics in courses.

## DEFINITIONS

Even if separate ethics courses are available, ethics and morality inevitably work their way into business law courses simply by the nature of the topics addressed, particularly in a survey course. The *Oxford English Dictionary* identifies ethics as “the science of morals,” and “the department of study concerned with principles of human duty,” (Garner, 1994, p. 17). “Ethics” comes from the Greek *ethos*, meaning character (Thiroux, 1986, p. 2). Ethics is “a code of behavior in society or among a specific group in society” (The Difference between Ethics and Morality, 2013). Ethics is a broader concept than morality; it is a code, or a set of rules, that an entire group or society adheres to. The idea of ethics is much less personal and focuses more on the philosophies of a society’s beliefs. When talking about ethics we are discussing the ideals of a society, group, or organization not those of an individual. Ethics should be used only in a context bounded by work and the term morality in the activity of living one’s life (Jones, 1996, p. 9). Ethics demands that the principles that apply to conduct be identifiable, objective. Principles relate to action, to how we should behave, and to the basis on which we choose a course of action” (Machan, 1997, p. 12) Ethics is a defined code of behavior that a group of individuals is expected to comply with regardless of personal beliefs or morals (Machan, 1997, p. 31).

Morality, on the other hand, is defined as “a doctrine or system of moral conduct” (Merriam-Webster Dictionary) or a “conformity to ideals of right human conduct” (Merriam-Webster Dictionary). “Morality” comes from the Latin *moralis*, meaning customs or manners (Thiroux, 1986, p. 2). Morality “refers to how you apply that philosophy in your own life” (The Difference Between Ethics and Morality, 2013). Morality is oriented to the individual; it is based on a set of values. One may learn morality from family, friends, church or community, but morality focuses on how the individual applies those theories. However, morality is learned from a life time of experiences. “An individual’s moral code is, thus, a set of moral principles that guides his or her actions; we all have such a code even though some of us might have difficulty articulating it.” (Wines, 2008, p. 487) Morality focuses more on the ideas or beliefs of an individual.

The differences between ethics and morality can seem minute, and to some, may seem inconsequential; however, they are quite different and those differences are significant. There are two opposing trends in the history of formal ethics: “There are first class thinkers who work to distinguish between ethics and morality, and there are other first class thinkers who systematically blur the distinction between the two” (Jones, 1996, p. 9) “In ordinary language, we frequently use the words “ethical” and “moral” (and “unethical” and “immoral”) interchangeably; that is, we speak of the ethical or moral person or act. On the other hand, we speak of codes of ethics, but only infrequently do we mention codes of morality.” (Thiroux, 1986, p. 1) We must distinguish, and separate the definitions of the terms to effectively discuss them.

## ETHICAL THEORIES

<b>Table 1</b> <b>OVERVIEW OF ETHICAL THEORIES</b>		
<b>Ethical Theory</b>	<b>Sub-Theory</b>	<b>Key Theorists</b>
Utilitarianism (Consequentialism)		Bentham, Mill, Smith
Deontology (Kantian Ethics)	Duties and Rights Divine Command	Kant
	Act	
Teleological	Justice Theory (Rawlsian)	Rawls
	Virtue Theory (Aristotelian)	Aristotle
	Ethical Egoism	

The study of ethics, and ethical theory, is significant and represents a course of study all its own. However, an understanding of the general theories is essential to understanding the difference between ethics and morality and how to apply it in courses. There are several major ethical theories.

Utilitarianism (consequentialism) focuses on the greatest good. The Consequentialist is “concerned solely with effecting valued results, regardless of the motivation. To do the morally right thing is to produce what is good or valuable, whatever the person may intend by the action.” (Machan, 1997, p. 38) The chief theorists are Jeremy Bentham, John Stuart Mill, John Stuart, and Adam Smith (Thiroux, 1986, p. 43). There are several sub-sections of utilitarianism, but the main focus is on creating the greatest good or value by the decision. A decision is viewed as right or wrong based on whether the greatest good, or value, was achieved.

Deontology focuses on duties and rights. Kant focused on the “motivation behind an action” (Major Ethical Theories, 2013) (Brown, 2013) instead of the action itself. Kant’s theories are ruled based. “The moral goodness of a deed derives from its being intended by the agent to be nothing except a morally good deed. A person may act in accordance with ethics or morality, but if she does it for pleasure or hope to go to heaven or to win public approval as a result, no moral praise will be forth coming even though the act accords with morality. An agent exhibits moral goodness only when he has the purest intention to be morally good.” (Machan, 1997, p. 37) Rule non-consequentialist theories believe there are, or can be, rules which are the only basis for morality and that consequence do not matter. It is following the rule that is moral (Thiroux, 1986, p. 60). The rule created must be applicable to all human beings to be valid (Thiroux, 1986, p. 62) and no human can be a “means for someone else’s end” (Thiroux, 1986, p. 63). Kant felt we should obey rules out of a sense of duty (Thiroux, 1986, p. 63).

Also falling under the rules based theory of Deontology is Divine command theory. This theory focuses on the idea that morality is not based on consequences of actions or rules, nor on self-interest or other-interestedness, but rather on something “higher”. It is based on the existence of an all-good being or beings who have communicated to human beings what they should do and not do (Thiroux, 1986, p. 60). Divine Command Theory is generally interpreted as meaning that right and wrong come from the commands of God (or the gods) (Baber, 2013). What makes an action right or wrong depends on God’s commands. An act isn’t right just because we think it is; it is right because God commands it. There is a real distinction between right and wrong independent of what we think (Timmons, 2002, p. 23).

There are also act based deontological theories. They “approach each situation individually as one of a kind and somehow decide what is the right action to take in a situation (Thiroux, 1986, p. 58). This is a highly individualistic theory which looks at what a person feels is the right action not on a set of rules or consequences (Thiroux, 1986, p. 58).

Rawlsian ethics focuses on justice or fairness. It looks at “protecting individual rights, or preventing an injustice to an individual” (Baber, 2013). “Justice requires that all persons be guided by fairness, equity, and impartiality. Justice calls for even handed treatment of groups and individuals (1) in the distribution of the benefits and burdens of society, (2) in the administration of laws and regulations, and (3) in the imposition of sanctions and the awarding of compensation for wrongs suffered (Cavanagh, 2010, pp. 90-91). Standards of justice are generally considered to be more important than the utilitarian consideration of consequences (Cavanagh, 2010, pp. 90-91). Standards of justice are not as often in conflict with individual rights as are utilitarian norms. Both justice and moral rights are based on the recognition of the dignity of human beings (Cavanagh, 2010, pp. 90-91). Justice is not sufficient on its own, utilitarian norms and morals must be applied as well (Cavanagh, 2010, pp. 90-91).

Virtue ethics says that the main task is to “give us the knowledge of what is the right type of person not to supply us with the rules for what is the right type of actions” (Cavanagh, 2010, pp. 90-91). This theory asks “what kind of character must a person have to be a moral human being?” (Cavanagh, 2010, pp. 90-91) Here the theory “considers worth-while goals or objectives of central importance in making actions morally good and demand, in addition, that actions succeed in achieving the goal” (Machan, 1997, p. 38) Virtue Ethics is agent centered rather than act centered. (Garner, 1994, p. 220)

Ethical egoism can take three possible forms. Individual ethical egoism states that every one ought to act in self-interest. Personal ethical egoism states that “I ought to act in my own self-interest, but that I make no claims about what anyone else ought to do”. Universal ethical egoism states as its basic principle that every-one should always act in his own self-interest regardless of the interests of others unless their interest also serve his interests. (Thiroux, 1986, p. 2)

Ethics is developed as a set of norms or a value system (Thiroux, 1986, p. 71). When ethical decisions are made there are ‘various perceptions of facts, and different judgments or trade-offs.’ (Thiroux, 1986, p. 71) There are several options to help an individual make an ethical decision. “The five question approach “involves the examination or challenge of a proposed decision through the five questions. The proposed decision is to be challenged by asking all of the questions. If a negative response (or more than one) is forth coming when all five questions are asked, the decision maker can attempt to revise the proposed action to remove the negative and/or offset it.” (Brooks, 2000, pp. 187-188)

Is the decision:

1. Profitable?
2. Legal?
3. Fair?
4. Right?
5. Going to further sustainable development? (Brooks, 2000, pp. 188-189)

Stakeholder interest is examined in each of the five questions (Brooks, 2000, pp. 188-189). All five questions must be asked. A person cannot skip one or more questions and arrive at an appropriate answer.

The moral standards approach is more general and broad-based. It is more appropriate for questions that have an impact outside the organization (Brooks, 2000, pp. 188-189). Moral standards look at the key ethical theories (Utilitarian, Individual Rights, and Justice) to answer an ethical question. These theories are used to determine the most ethical decision. This approach is better for bigger, broader questions because it delves more deeply into the consequences of a decision.

Pastin's approach focused on ground rule ethics. Individuals and organizations have ground rules that govern their behavior. He recommends "reverse engineering" a decision by looking at past decisions to see how and why they were made (Brooks, 2000, pp. 188-189). He would recommend dissecting a past decision to better determine what went well and what did not. Based on that dissection the learning points are applied to the current issue to best determine the outcome.

These theories all address the how rules or codes should be created for a group or society they do not address individuals or how they feel about the rules or how they apply the rules to their personal life. While each theory may be quite different from the other they all have one commonality looking at the ideals of a larger group of people. The focus is on a set of rules, or a code, that an entire group must follow.

## MORAL THEORIES

<b>Table 2</b> <b>Overview of Moral Theories</b>	
<b>Moral Theory</b>	<b>Major Points</b>
Natural Law Theory	Certain acts are morally wrong no matter what
Moral Pluralism	There is a plurality of moral rules to apply
Moral Subjectivism	Individual beliefs of right and wrong
Cultural Relativism (Moral Relativism)	Set of principles or rules for the relevant culture

As with ethical theories, there are several major moral theories. Unlike ethics, the moral theories do not have any one key author or proponent that developed the theory fully.

Natural Law theory states that there are certain types of actions that are morally wrong in all circumstances. There is an objective set of moral principles based in human nature (Timmons, 2002, pp. 65-66). The basic premise is that there is a rule for every situation and those rules should be complied with. Moral Pluralism states that there are two main claims: there is a plurality of basic moral rules and there is no underlying moral principle that serves to justify these moral rules (Timmons, 2002, pp. 65-66). Each rule expresses a basic morally relevant feature that bears on the "overall deontic status of actions" (Timmons, 2002, p. 190). One can be pluralist about the nature of right action, the nature of intrinsic value or both (Timmons, 2002, p. 190). Here the idea is that there may be more than one rule that applies to a situation and there is no set principle on choosing which best applies to a situation.

Moral subjectivism focuses on what the individual thinks is right or wrong, eliminating any ability to criticize or argue one's behavior (Baber, 2013). One can argue that the decision is correct simply because he made it. This is, quite obviously, a self-focused theory.



Cultural Relativism states that right and wrong are “determined by the particular set of principles or rules the relevant culture just happens to hold at the time” (Baber, 2013). The rightness or wrongness of actions ultimately depends on the moral code of the culture to which one belongs. If two cultures have two different moral codes then an act could be ok in one culture and not the other (Machan, 1997, p. 12).

Each person moves through life at their own pace, similarly, they develop their moral identity at their own pace as well. There are four components to moral decision-making according to James Rest: moral sensitivity, moral judgment, moral motivation, and moral character. Moral sensitivity is the comprehension of moral content when present in a situation. Moral judgment is determining the moral thing to do. Moral motivation is choosing the moral decision over other values. And, Moral character is having certain qualities such as ego, perseverance and the courage to act. (Wines, 2008, p. 487) Several theories on moral development have been created, most notably by Kohlberg, Piaget, and Dewey. They are all fairly similar and most are thought to be strongly influenced by Kohlberg (Cavanagh, 2010, p. 52); therefore, the focus will be on Kohlberg’s theory.

Lawrence Kohlberg identified three levels of moral development that an individual can move through. Within each level are two stages of development. All people move through these levels and stages at their own pace. It is very rare to find someone who has reached the final stage and most managers are found to reason at level two stage three or four (Cavanagh, 2010, pp. 50-51).

<b>Table 3</b> <b>Kohlberg’s Levels of Moral Development</b>	
Level 1 – Self Interest	
	Stage 1 – Avoidance of Punishment
	Stage 2 – Instrumental Egoist
Level 2 – Approval	
	Stage 3 – Social Relations
	Stage 4 – Law and Order
Level 3 – Autonomous	
	Stage 5 – Social Contracts
Stage 6 – Conscience and Principle	

Level 1 is a time of self-interest, like that of a child; there is little focus on others’ needs. At this level a person sees rules as something imposed from the outside and in terms of pleasant or painful consequences. Within Level 1 are stages 1 and 2. Stage 1 focuses on punishment or avoiding punishment. Stage 2 is called instrumental egoist; here a person focuses on doing something to get a reward. (Cavanagh, 2010, pp. 48-50)

Level 2 focuses on approval. Most adolescents and some adults fall into this level. The focus is on maintaining the expectations of family, peer group or nation. A person at this level is able to understand another’s point of view, but assumes everyone has a similar point of view as he does. Within Level 2 are stages 3 and 4. Stage 3 is a time for social relations; a person won’t do something because he wants people to like him. Approval is earned by being good and conforming to what is expected. This stage explains the popularity of gangs, fraternities and sororities in adolescents. Stage 4 focuses on law and order and a person not doing something because it would break the law. Laws conventions and order are essential because they enable a society to function. Loyalty to the nation and its laws are paramount. A person at this stage sees others as individuals and as part of the larger social system; he enters this stage by experiencing the inadequacies of stage 3. (Cavanagh, 2010, pp. 48-50)



At Level 3 a person looks for autonomous, principled, and abstract ideals and no longer simply accepts the values and norms of the groups to which he belongs. There is an effort to find moral values and principles that impartially take everyone's interests into account. A person questions norms and laws at this level. Within Level 3 are Stages 5 and 6. Stage 5 is the creation of a social contract where a person won't do something because moral law obliges him not to. A person at this stage believes people hold conflicting views, but rules must be upheld in the interest of society and the social contract; therefore, laws are agreed on and must be followed impartially and absolute values, such as life and freedom, are held regardless of differing individual values or even majority opinion. Utilitarianism is the characteristic ethical standard at this stage. Stage 6 focuses on conscience and principle; a person won't do something because it is not right no matter what others say. Decisions of conscience are based on universal ethical principles and not specific, concrete moral codes like the Ten Commandments. Doing right is based on care for fellow human beings and a belief in the validity of universal moral principles. It is unusual to find people who have achieved this level. (Cavanagh, 2010, pp. 48-50)

Morality looks at personal beliefs. As you can see, the moral theories focus on what is right and wrong and are often focused on an individual or a religion. Morality is the individual application of a set of ideals. Ethics is then the philosophical study of morality (Baber, 2013). Ethics takes the morals of a group or society and derives a code, or set of rules, based on those ideals.

### **ETHICS VS. MORALITY**

Studies show that morality is something developed over one's life. Each person moves through different developmental stages at their own pace. "Moral education has been traditionally conducted with reference to the norms of local and religious communities. Indeed, a major responsibility of parents has long been to shape children so that they will be acceptable in the community in which they live." (Noddings, 2010, p. 390) Things like family, religion, culture all come into play with morality. "A person's morality is influenced by a variety of internal and environmental factors." (Gardiner, 2012) Both Lawrence Kohlberg and James Rest identify different stages of moral decision making that an individual will move through in a lifetime. College can have a significant impact on moral reasoning for students in liberal arts and other disciplines, but in disciplines which are more vocational (such as business) this development is significantly lower (Gardiner, 2012). Most students, by the time they have entered our classes, have a strong sense of moral character, one that isn't going to be easily changed or swayed by the information provided in class or the arguments of fellow students. These ideas cannot be changed in the course of a semester. Teaching of morality in the classroom would require a sensitivity and knowledge of each and every student, their background, and their beliefs, which is impossible even in the smallest class. There are too many facets impacting a person's morality. But ethics is a code, or a set of rules, that we all must comply with. These must be taught.

Ethical theory, however, can and should be taught in the classroom. Most Students don't come to university with a true concept of what ethical theory is. They certainly do not fully understand the ethical expectations set on them by the professions they are entering into. These requirements exist regardless of one's moral beliefs, and it is our obligation as educators to provide them this information and a clear understanding of it. Both ethical theories and the applicable laws and legislation should be taught. Students will not learn this information in another setting and they will be held by these rules for their entire professional lives. Some argue that ethics cannot be taught, (Velasquez, Andre, Shanks, S.J., & Meyer, 1987) but if we do not teach ethics in a business law class we will not be providing students with the tools necessary to

understand the expectations they will be held to account for and we will not provide them with a background to develop ethical awareness (Velasquez, Andre, Shanks, S.J., & Meyer, 1987). There are many different theories of ethics. Some of them are more realistic than others. It is important that students know there are many different theories or ways of looking at ethics. It is up to the individual educator to determine the appropriate level of detail for the course.

The AACSB International has insisted on the inclusion of ethics in business curricula. Ethics education is called for in the general knowledge and skills portion of the standards for under graduates and in the management specific portion of the standards for under graduate and master's students. The classroom is a place to present new ideas and challenge students to evaluate their own ideas and expand their understanding of others and appreciate those differences. However, moral issues are deeply personal, they cannot, and will not, be changed in the course of a single class after being developed over a lifetime. The focus in the classroom should be on ethics, laws, and the debates that arise from these topics.

### **APPLICATION IN BUSINESS**

All of the ethical theories can be applied in business decisions. However, some theories lend themselves more readily to business application. The Deontological Theories focus on individuals and parallel the Bill of Rights. Decisions under this theory can be individualistic and selfish (Cavanagh, 2010, p. 92). The justice and virtue theories are more democratic and it ensures everyone gets a fair share without status or class dominated societies. However, this can result in less risk, incentive and innovation. It may also create a sense of entitlement (Cavanagh, 2010, p. 92). Utilitarianism is the easiest theory to apply for business decisions. It encourages entrepreneurship, innovation, and productivity. Decisions are based on views beyond just the firm. However, there are negatives just as there are for the other theories. Most importantly it may be difficult to measure or quantify all elements of a decision (Cavanagh, 2010, p. 92) possibly encouraging one to skip those elements while evaluating a decision. This can lead to selfish decisions that do not create the greatest good and impede on others' rights. Additionally, because it is a measuring process there may be a tendency to neglect less powerful groups in society.

### **ETHICS LAWS**

Many laws have been put into place to address the ethical requirements of businesses and the individuals within those businesses. When looking at the laws, there is much discussion about what is ethical, what sort of ethics program is required and what the punishment will be for ethical violations. Not one of the laws addresses moral violations; instead the focus is on ethics and punishment for violation of ethical codes. In addition to federal laws addressed in this paper, many professional organizations, such as Certified Public Accountants and Lawyers, have their own set of ethical requirements. The focus is on the expectations set by the group, or society, not an individual's belief system.

Legal rights of an individual are stated in laws, rules or a constitutional system; the U.S. Bill of Rights, and the United Nations Universal Declaration of Human Rights spell out individual rights in detail. Every right has a corresponding obligation or duty. Your right to freedom of speech places an obligation on others to respect that right." (Cavanagh, 2010, p. 92)

In this Post-Enron era, the creation of statutes and policies to aid in the efforts to prosecute white collar crime have altered the ways companies can and will operate. It can be expensive and complicated for an organization to comply with all the new rules addressing ethics in an organization. Some even argue that all the legislation has caused companies to focus on following the letter of the law and not focus on acting ethically (Bishop, 1992, p. 293). Regardless these are the laws which organizations must comply with. Below is an overview of the key laws and legislation in the area of ethics.

<b>Table 4</b> <b>Overview of Ethics Laws</b>	
<b>Laws</b>	<b>Summary</b>
Federal Anti-Fraud Legislation	Criminalizes dishonest business practices
Public Welfare Laws	Punishes negligence even if best efforts used
Sarbanes Oxley Act	Requires corporate responsibility and reporting requirements
Securities Exchange Act of 1934	Addresses liability for fraud and misleading statements
Sentencing Commission Guidelines	Scoring factors for punishment

### **Federal Anti-Fraud Legislation**

This criminalizes all forms of dishonest business practices. This legislation does not require actual proof that the defendant “obtained the property of the victim or deprived the victim of the intangible right of honest services or that the victim relied on any representation of the defendant.” (Hasnas, 2007, p. 402) It can be a scheme to defraud and no actual fraud has to have occurred (Hasnas, 2007, p. 402).

### **Public Welfare Offences**

Congress created these offences which can be committed by negligence even if one has used his best efforts to comply with the law (Hasnas, 2007, p. 403). “Under the “responsible corporate officer” doctrine, any person that has “authority to exercise” control over one who commits a public welfare offence may be charged with his or her subordinate’s offense” (Hasnas, 2007, p. 402)

### **Sarbanes-Oxley Act of 2002 (SOX)**

The implementation of SOX has caused companies to evaluate their ethical behavior to ensure compliance. Several key sections of SOX address requirements for ethical behavior, and documentation of those requirements, by companies and their employees. “The main provisions of SOX include (1) the creation of a five-member board whose job is to oversee auditing, quality control, and independence standards and rules for public accounting firms; (2) protection for whistle-blowers; (3) white-collar crime penalty enhancement; and (4) verification of financial statements by chief executives of publicly traded companies.” (Beggs & Dean, 2007, p. 19) *Section 302* gives corporate responsibility for financial reports. This Section requires that the signing officer reviewed the report, that based on that officer’s knowledge, the statements contain no fraudulent or misleading information, that the financial statements and other financial information fairly present all material aspects of the financial conditions and results of operation and that the signing officers have disclosed any fraud, material or not, to auditors and the audit committee (Sarbanes Oxley Act of 2002). *Section 401* addresses disclosures in Periodic

Reports requiring that Pro Forma statements cannot contain fraudulent statements or omissions of material fact which make the statements misleading (Sarbanes Oxley Act of 2002). *Section 404* places responsibility on management for “establishing and maintaining an adequate internal control structure and procedures for financial reporting” (Sarbanes Oxley Act of 2002). *Section 805* addresses federal sentencing guidelines for obstruction of justice and extensive criminal fraud (Sarbanes Oxley Act of 2002).

### **Securities Exchange Act of 1934**

The Securities Exchange Act of 1934 contains several sections addressing the ethical behavior of organizations. Section 32 deals with will full violations through false and misleading statements. In addition, individuals within a corporation can be held personally liable for their actions under 32(a) if they will-fully violated the law and allow the Commission to bring a civil action against the individual with a maximum penalty of \$10,000 (Securities and Exchange Act of 1934 §240,2010). *Section 18* of the *Securities Exchange Act of 1934* punishes those who “make false or misleading” statements with regard to a material fact that someone relies on in purchasing or selling a security with fines equal to the damages caused (Securities and Exchange Act of 1934 §240, 2010).

### **United States Sentencing Commission**

The *United States Sentencing Commission (2004)* guidelines have been revised. Under the new guidelines organizations are scored based on six factors. This score is used by the sentencing court when considering punishment. Four of the factors can increase the punishment rendered and two factors can mitigate the punishment. Those factors that can increase punishment are: involvement or tolerance of criminal activity, prior history of the organization,

violations of an order, or obstruction of justice (U.S. Sentencing Guidelines Manual, 2008, p.491). The factors that can mitigate punishment are: existence of an effective compliance and ethics program and self-reporting, cooperation, or acceptance of responsibility (U.S. Sentencing Guidelines Manual, 2008, p.491).

## **CLASSROOM APPLICATION**

We now understand how ethics and morals are different and how ethics can and is applied in business and law because ethics is a set of rules, or a code, that a group is expected to comply with as opposed to morals which are an individual based set of ideals. The focus on ethics over morality seen in business and law should be echoed in the business law classroom. Allowing the focus to move away from law and ethics and move toward morality distracts from the purpose of the class and can often put students of differing views in the awkward position of being at odds with one another. Not that heated discussions in a classroom cannot be beneficial, but often morality issues become personal and instead of healthy discussion some individuals may feel they are being attacked or criticized and the conversation quickly moves from a discussion to an argument. When morality becomes the focus of the class it eliminates the ability to teach the legal or ethical lessons necessary for the course. In order to effectively teach the course, morality should be removed from the conversation as much as possible.

There are many examples where students tend to move the focus away from the legal and ethical issues of the case and move toward the moral issues they see in the case. One example where this often happens is *Automobile Workers v. Johnson Controls* (Automobile Workers v. Johnson Controls, Inc., 1991). The Johnson Controls case is where Johnson Controls decided to no longer allow women to hold positions where they are exposed to lead in order to avoid possible exposure to an unborn child. This case is intended to focus on Bona Fide Occupational Qualifications (BFOQ) and is often a place in the course where we discuss the difference between law and ethics and how sometimes an action may seem unethical but may be legal. However, often, students want to move the focus of the conversation to the moral issue of reproductive rights for both men and women. While this is always an interesting, and heated, conversation, it diverts the focus from the discussion of law and ethics in the case. In addition, it often makes students uncomfortable and makes others feel at odds with their colleagues.

The Barren Cow Case (Sherwood v Walker, 1887) is a law school favourite, addressing the sale of a cow. The case is also often used in Business Law courses dealing with contracts. Here students want to argue whether or not it was morally right to sell a cow that could, or could not; reproduce instead of whether or not there is a valid contract. Again, the important learning point is missed with argument.

Entrustment cases often raise moral issues for students as well. The case I often use to illustrate this rule is the Andy Warhol painting case (Lindholm v Brant, 2007). Here an art collector entrusts a Warhol painting to her representative who is also an art dealer. The art dealer sells the painting without the knowledge of the owner. The owner then tries to sell the painting herself only to find it has already been sold. Here the question is whether the dealer has the right to sell the painting. However, often the focus is on the fairness of the situation and whether or not it was a moral act for the dealer to sell the painting.

Additional cases can be discussed, based on current news stories, such as Enron, Lehman Brothers, any of the Ponzi scheme cases, etc. Without care, these case discussions can easily move from a discussion about the ethics and legal aspects of the case to the moral aspects of the case. While both sides may be important, in a Business Law course the focus must be on the Laws and not on personal feelings about the morality of a situation.

## CONCLUSION

Ethics is an important area of study for business students. Students must understand the laws as they will apply and, therefore, it is important for them to understand the basic concepts and theories for which those laws are based. Law and ethics go across diverse groups of individuals; these rules apply regardless of race, gender, religion, and so on. On the other hand, morality is difficult to address. It is different, and often unchangeable, for each person. By allowing moral arguments to enter the classroom we are complicating the ability to teach both law and ethics, two areas that are not just essential for business students, but also required by the AACSB. Students may have a strong sense of their moral beliefs by the time they are in our classrooms, but they often do not understand, or empathize with differing moral beliefs. More importantly, they rarely come with a concept of ethical theories and the rules and laws associated with them. These are laws they will be required to comply with in their professional lives and it is our obligation as educators to provide this information to our students.

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# LESSONS FROM MOOCS: VIDEO LECTURES AND PEER ASSESSMENT

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## ABSTRACT

*What have professors learned from MOOCs (Massive Open Online Courses) in the first 2 years of their popular existence? This paper focuses on the practical lessons learned by professors in their role as teachers in higher education. The lessons were gleaned from (1) reports of the experiences of MOOC teachers and learners, (2) the author's experience completing several MOOCs as a learner, and (3) the author's experience as a professor who incorporated MOOC features into more traditional online and face-to-face courses.*

*"Lesson learned" include (1) the role of video lectures to deliver content, in lieu of the textbook or live lectures, and (2) the use of peer assessments to provide learner feedback and evaluation. Regardless of their future in higher education, MOOCs have demonstrated the value of video lectures and peer assessments. MOOCs have motivated professors to "raise their game" in terms of teaching face-to-face and paid online courses. Combining the automated features of a MOOC, with the instructor interaction and feedback of a traditional course, yields a blended form of instruction that may be superior to both.*

## INTRODUCTION

What have professors learned from Massive Online Open Courses (MOOCs)? The MOOC course format burst on to the higher education scene in 2012, "The Year of the MOOC," according to the New York Times (Pappano, 2012). Since that time growth in students, courses, and university partners has been phenomenal (Dhawal, 2013). Three major MOOC platforms (Coursera and edX founded in 2012, and Udacity founded in 2011) have been joined in an increasingly crowded field of providers. Coursera alone reported enrollment of 22,232,448 students, from 190 countries, and across 571 courses by January 2014 (Coursera, 2014).

Oxford Dictionaries (n.d.) defines a MOOC as "A course of study made available over the Internet without charge to a very large number of people." This paper uses the term MOOC in the popular sense to refer to the xMOOC, or "broadcast" MOOC (as distinct from the cMOOC or connectivist MOOC).

"These (xMOOCs) offered on university-based platforms are modelled on traditional course materials, learning theories and higher education teaching methods. For example, they usually are organized around lectures and quiz-type assessment methods. Also these courses typically use little distributed content that's available on the Web outside the platform. Most course content is pre-recorded video lectures which are posted on the courses' home page" (Morrison, 2013). These archetypical course formats will undoubtedly blend and evolve into different varieties in the future, such as synchronous massive online courses (SMOCS) and distributed open collaborative courses (DOCCs) (Played on, 2013).

## LESSONS LEARNED

This paper focuses not on the MOOC movement, but on the practical lessons learned by professors in their role as teachers in higher education. The lessons were gleaned from (1) reports of the experiences of MOOC teachers and learners, (2) the author's experience completing several MOOCs as a learner, and (3) the author's experience as a teacher who incorporated MOOC features into more traditional online and face-to-face courses. The MOOC "lessons" are contrasted with face-to-face and "mainstream" online courses (Johnston, 2014), which have also been called SPOCs, or small online paid-for (private) courses (Playdon, 2013).

A number of support people and professors have shared their "lessons learned" from creating and teaching MOOCs, including those from Vanderbilt (Bruff, 2013), the University of London (Grainger, Barney, 2013), the University of Wisconsin (2013). MOOC-like innovations in video, for example, can be used to "bring the investments made by MOOCs to the benefit of a wide range of teachers and students" (Duhring, 2013). A Wall Street Journal "report card" emphasized the role of interaction and engagement in the success of MOOCs (Fowler, 2013).

"Lesson learned" discussed in this paper, from MOOCs and as applied to "traditional" courses, include (1) the role of video lectures to deliver content, in lieu of the textbook or live lectures, and (2) the use of peer assessments to provide learner feedback and evaluation.

## VIDEO LECTURES

The defining characteristic of a MOOC is the use of video to deliver content, at the exclusion of a textbook. MOOCs exclude a textbook to maintain openness. The use of video lectures frees students from obtaining and paying for a textbook. Often a textbook is recommended, but not required to complete a MOOC.

MOOC video lectures are typically relatively brief (5 to 20 minutes). Although the "production values" vary, there appears to be a minimum level of quality that is a benchmark for MOOC video. Typically MOOC video lectures will, at a minimum, feature a video recording of the professor (a "talking head"), interspersed or overlaid (such as picture-in-picture) with presentation slide graphics and text.

A higher quality level may use a "green screen" to overlay the instructor video onto graphics or presentation text. Video lectures may include "real-time" recording of the professors "pen" with written annotations, calculations, or sketches (in some calculation-intensive courses the pen is the star). Examples of MOOC video lectures are available at [www.coursera.com](http://www.coursera.com).

Video quality that falls below the benchmark includes video recording of the instructor presenting content to a live classroom (with few exceptions). A video recording without the instructor's face, such as of a narrated presentation slide show, would be below the benchmark.

What can professors learn from MOOC video lectures? First, it stands to reason that students who experience MOOC-benchmark-quality video for free would expect no less from paid online instruction from a university. MOOC video lecture quality may set student expectations for an acceptable or benchmark quality of video lecture quality in paid online university courses. More fundamentally the MOOC reliance on video lecture may set expectations that paid online courses also rely on or at least include video lectures, and not rely on a student reading a textbook to deliver content.

If true, then professors will need to record lectures on video. The costs, in terms of professor time and production cost can be great. The Chronicle of Higher Education (Kolowich, 2013) chronicled the costs of MOOC-making: “Typically a professor spent over 100 hours on his MOOC before it even started, by recording online lecture videos and doing other preparation. Once the course was in session, professors typically spent eight to 10 hours per week on upkeep.”

John Owens, at the University of California at Davis, spent 150 hours building his MOOC, “Introduction to Parallel Programming,” for Udacity, and about five hours per week posting on the discussion forums (Kolowich, 2013). Geoffrey Hinton, a professor of computer science at the University of Toronto, said of MOOC teaching: “It’s equivalent to volunteering to supply a textbook for free and to provide one chapter of camera-ready copy every week without fail” (Kolowich, 2013).

## **Course Content**

The economics of creating a MOOC hinge on the source of the content. If a professor has written a book (and has the rights or publisher’s permission to use the content), the process of scripting/outlining and recording lectures is pretty straightforward. For example, Kevin Werbach of the Wharton School said, “I designed and ran a Coursera MOOC for 82,000 registrants with a 10% completion rate using one part-time grad student (Werbach, 2013).” The course was Gamification, based on a book by Werbach & Hunter entitled “For the Win: How Game Thinking Can Revolutionize Your Business.”

If a professor uses a textbook as the source of course content, then the challenge becomes: How to get permission from the publisher to “give away,” in video lecture form, the content of the not-required textbook?

Finally, the professor could develop content from original sources and open-source graphics and photos. At Vanderbilt University, MOOC developers found, “Given the open nature of videos posted to Coursera, no copyrighted material could be used in the lecture videos without permission from the copyright holder. Our lawyers told us that the educational clause under fair use doesn’t apply here. Every single image in every single slide deck used in our MOOCs had to be checked for copyright status, and many of those images had to be replaced with public domain, Creative Commons, or locally created images” (Bruff, 2013).

Content is one aspect of online teaching where the traditional paid-online course may have an advantage over a MOOC. Assuming a professor (1) “requires” a textbook, (2) presents its content as video lectures to registered students, and (3) serves it via password-protected online access, he or she should be relieved of some of the MOOC content-creation burdens when creating video lectures.

## **Flipped Classroom**

Closely linked to the use of video lectures is the idea of the “flipped” classroom. When MOOC instructors are asked what experience they will take to their face-to-face classroom, “flipping” the classroom is often mentioned. A “flipped” classroom blends online and offline learning. Students watch video lectures online, before class, and then come to class to work on “hands-on” projects and interact with faculty and classmates.

Professors with MOOC experience have “flipped” their face-to-face classes by assigning video lectures as pre-class homework, including professors at Duke (McGuire, 2013), MIT (Chen, 2014), and Stanford (Blank, 2014), and professors of a variety of chemistry classes (Arnaud, 2013). These universities do not accept their own MOOCs for academic credit, yet the MOOC video lectures have become part of the face-to-face for-credit class experience.

It is understandable that a MOOC veteran professor would want to make good use of a complete set of good quality video lectures by making them available to his or her face-to-face class, to “free up” class time for more interactive activities. Professors at Duke (McGuire, 2013) and Rice University (Arnaud, 2013) mentioned that the prospect of getting a set of video lectures was a motivation for preparing a MOOC.

Some see the benefits of designing a face-to-face “wrapper” around a set of video lectures (Fisher, 2012). Others are troubled by the idea of being asked “against their will” to flip their courses by using another professor’s recorded lectures (Rees, 2014), and the potential threat to the professorate (Parry, 2013). Ideally a professor could combine a strong point of MOOCs, the video lectures, with active learning and personalization to create the student engagement that is limited in the MOOC format.

## **PEER ASSESSMENTS**

A peer assessment in its simplest form is (1) an opportunity for a student to evaluate the work of a peer student, and (2) an opportunity for a student to have his or her work evaluated by a peer student. Clearly MOOCs did not invent peer assessments. But MOOCs made much more intense use of peer assessments because (1) they used peer assessments as a substitute for instructor evaluation, and (2) they automated the process.

First, MOOCs used peer assessments as a substitute for instructor evaluation out of necessity. It was not practical too provide human assessment of work for MOOCs with tens-of-thousands of non-paying students. Second, a peer assessment has many “moving parts,” discussed next, and out of this complexity and the scale of class sizes, peer assessments were automated.

A peer assessment process may involve the following steps:

1. A student submits an assignment.
2. Sometime after the assignment due date, the student receives the work of one (or typically more) students to review.
3. The student submits the peer assessments, which may include a qualitative (written) and quantitative (based on a scoring rubric) components.
4. Sometime after the peer assessment due date, the student receives feedback on her work.
5. At some point the student receives an evaluation “score” or grade on the assignment.
6. The student may receive a “score” on her peer assessment output.

Proof of the concept that peer assessments can be automated and used intensively in online courses was a contribution of the MOOC format. The MOOC implementation had limitations, however. One argument for peer assessments was that peer grading is a valid measure of performance (Sadler & Good, 2006). Unfortunately this empirical truth is not comforting to students who feel slighted by the peer process (Rees, 2013).

One limitation is that students did not appreciate the feedback from their peers. MOOCs serve a wide cognitive diversity of students in MOOCs, which leads many students to not respect their peers as “qualified” to evaluate their work. Bruff (2013) described the cognitive diversity found within a MOOC: “You have students who have never set foot in a post-secondary classroom and other students with advanced degrees. You have students who have very little experience with the course topic and other students who have spent decades in the field.” A student with experience and education in a topic is often disappointed by the quality of written feedback for his less-endowed peers.

Another limitation is that students find the evaluative criteria behind the quantitative evaluation (scoring rubric) to be trivial. Again, to accommodate the cognitive and language diversity, scoring rubrics often capture the unambiguous but uninteresting aspects of the work. For example, the assignment may call for a student to make an argument with at least 3 points, and the rubric asks the peer grader to count the number of points made. An argument with 3 points may be weak and yet earn a perfect score.

In summary, a student who submits a thoughtful written assignment, and receives weak (or no) written feedback, or a score from a trivial rubric that goes directly to the course grade, is not a happy student. Watters (2012) summarized the problems of peer assessments as including: The variability of feedback, the lack of feedback on feedback, the anonymity of feedback, and the lack of community.

Here again is an opportunity for professors to learn from the MOOC experience, and adapt the beneficial parts of the technology. Professors in smaller, paid-online courses can implement automated peer assessments using a capable learning management system, such as in structure canvas.

The peer assessment process can be improved over the MOOC process in the following ways. First, students are more likely to accept feedback from their peers if they are similar in terms of preparation on the topic (really peers). Students can know the names of their reviewers, even if they are not personally known outside of class.

Also, the quantitative peer assessment criteria can more sophisticated, and the scores not directly entered as grades, but mediated by the instructor. Most importantly the student feedback does not rely exclusively on peers. Peer feedback can be supplemental to thoughtful scoring and comments by the instructor. These factors can mitigate some of the unhappiness with peer assessment found in MOOCs.

The author has timed the peer feedback to occur between the draft and final versions of a project, so students could use the feedback to improve their final product; this feedback was well-received by students. The peer assessment process also solves a “problem” of a lack of interaction between students in online classes. Requiring discussion board participation sometimes feels forced and artificial, and the peer assessment process provides an intentional set of interactions between students, which result in a form of mini-discussion of the assignment.

## CONCLUSION

What have professors learned from MOOCs in the first 2 years of their popular existence? First, MOOCs have shown that video lectures can be an effective means of receiving content, in lieu of reading a textbook. Professors must make a large investment to create their own video lectures, especially if it involves creating original content. The payoff comes when video lectures are used in online courses to deliver content in a more vivid way than a text-based format. Also, video lectures can be used in face-to-face courses as supplements to lecture, or as replacements for lectures in a “flipped” classroom.

Second, MOOCs have drawn attention to the idea that peer assessments can improve learning outcomes, and be automated and hence implemented relatively inexpensively.

Especially in online classes, the peer assessment process can provide a minimum level of interactivity for each student.

Regardless of their future in higher education, MOOCs have demonstrated the value of video lectures and peer assessments. MOOCs have motivated professors to “raise their game” in terms of teaching face-to-face and paid online courses. Combining the automated features of a

MOOC, with the instructor interaction and feedback of a traditional course, yields a blended form of instruction that may be superior to both.

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# INTEGRATING AN ERP INTO THE CURRICULUM AT A BUSINESS SCHOOL: THE STUDENTS' PERCEPTIONS OF SAP

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## ABSTRACT

*Enterprise Resource Planning (ERP) software has been offering an integrated enterprise-wide database driven management solution for organizations for many years. As the deployed base of ERP systems grew and spread to a much more diverse type of organization, it became more important that we integrate the use of this technology into our curriculum. In May 2013 our school joined the SAP University Alliance program. Once we integrated SAP into the curriculum, we sought to determine if the current approach is successful in improving the student's attitude toward an ERP system such as SAP, while also increasing their confidence in working with that technology. In order to evaluate the effectiveness of this endeavour, we chose to evaluate the students' perspective regarding the usefulness, ease of use, and the benefits derived from the SAP exercises. We conducted two surveys (pre- and post-treatment) to compare our students' perception on the value of the SAP ERP software before and after they received training and used the system. The study was conducted in the fall semester of 2013 and again in the spring and summer semesters in 2014 in several upper division undergraduate Management Information Systems classes. The data was collected from eight sections of the course that was taught by three different faculty members. This resulted in obtaining 230 valid paired cases for analysis. Findings indicate that participants have positive perceptions on the usefulness, ease of use, and intention to use the ERP system. Also, the findings indicate that overall the training material and exercises they used helped them appreciate the functionality of the system, its usefulness, and its ease of use. This represents an important finding given the widespread use of ERP systems in the business world and the need of employers to recruit newly graduates with the necessary skills to fulfil current and future needs. We found this first experience integrating SAP ERP into our core curriculum to be a positive experience.*

**Keywords:** *Technology Acceptance Model (TAM); SAP ERP; Business Administration Curriculum; Assessment of Learning*

## INTRODUCTION

Enterprise Resource Planning (ERP) software has been offering an integrated enterprise-wide database driven management solution for organizations for many years. However from their inception, these systems were generally deployed in larger companies such as those in the Fortune 500 since they required a significant investment for data conversion, business process re-engineering, and the addition of on-going technical support resources. However, as the systems

became more focused and more mature, they became increasingly practical for smaller organizations. The availability of cloud-based applications and data storage from ERP providers such as SAP (2014) has dramatically increased that trend. When SAP is implemented via the cloud, companies do not have to have their own servers or tech support personnel on site. This makes the SAP service much easier to implement and much more affordable to support. They now offer implementations that are on-site, on-demand, or mobile according to their Website. SAP also reports that 80% of their customers are small and medium enterprises, (SMEs).

As the deployed base of ERP systems grew and spread to a much more diverse type of organization, it became more important that we integrate the use of this technology into our curriculum. This would also assist in meeting an objective where we provide instruction and experience in using technology to assist in making business decisions. To this end, we took advantage of an opportunity to include education and experience in using the SAP system in our curriculum. The approach that we employed was to incorporate exercises that used the actual SAP software in the same manner as it is used in industry. Those SAP-based exercises would allow the students to observe and accommodate the interactions whereby an action or a decision within one business function has an impact upon another business function.

In May 2013 our school joined the SAP University Alliance program and partnered with California State University at Chico. This provided access to a cloud-based service that they hosted that employed the SAP ERP system. This academic approach uses a fictitious company called Global Bike, Inc. (GBI). In the fall semester of 2013 the School of Business was able to integrate SAP into our curriculum. This system utilized a mostly comprehensive database that helps trainees interact with the key modules of SAP. Once we integrated SAP into the curriculum, we sought to determine if the current approach is successful in improving the student's attitude toward an ERP system such as SAP, while also increasing their confidence in working with that technology.

## **LITERATURE REVIEW**

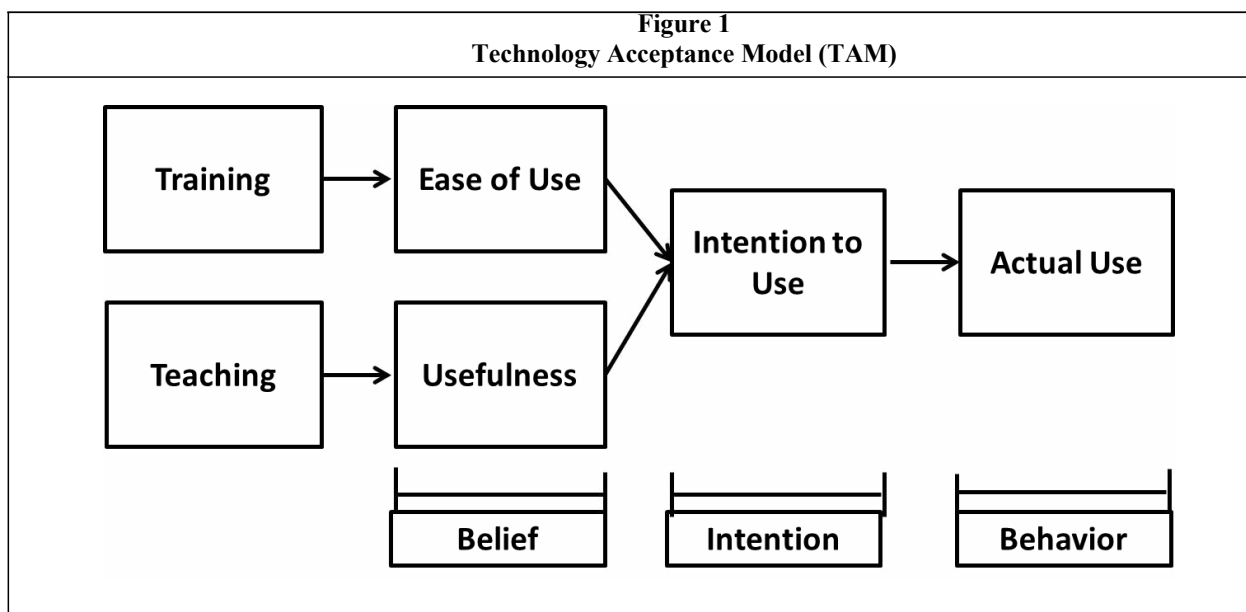
Comprehensive reviews of existing ERP literature showed that articles categorized as "education" items focus on uses of ERP in education and on curriculum and course design (Alshare & Lane 2011). Becerra-Fernandez, Murphy & Simon (2000) explored the challenges schools face when integrating the software into the curricula. Bradford, Vijayarama & Chandra (2003) surveyed the extent of adoption by various schools; Nelson & Millet (2001) reported on student's perception on their level of knowledge before and after taking a course on ERP and business processes. Wagner, Majdawi, & Otto (2000) reported results of a study that seek to measure the effect on student's understanding of cross-functional business processes after working with an ERP system.

Research on the learning outcomes of incorporating ERP in the business curriculum is still incipient. Davis & Comeau (2004) surveyed students' perspective on the extent of knowledge they gained in an ERP capstone course in terms of understanding the business value of ERP systems, their perceptions of self-efficacy, and their confidence in their ability to contribute as a member of an ERP implementation team or as manager of individuals in an ERP-enabled work environment. Noguera & Watson (2004) tested the effects of learning styles and three instructional delivery methods (lectures with readings, lectures with hands-on transaction exercises, and lectures with simulated transactions) on students' performance, self-efficacy, and satisfaction.

Most recently, Alshare & Lane (2011) and Iriberri, Kwon & Henson (2014) seek to determine the effect of having hands-on exposure with an ERP on specific learning outcomes. Alshare and Lane measured student's perception on their likely performance in the course project and in the course as a whole and on their satisfaction with the quality of the learning experience,

their enjoyments of the course and their likelihood of recommending the course to other students. Iriberri et al. investigated the effects of having hands-on exposure with an ERP on students' perception on the ease of use and usefulness of the system and on the quality of the course material.

In their analysis of learning outcomes Alshare & Lane used the Unified Theory of Acceptance and Use of Technology model (Venkatesh, Morris, Davis & Davis, 2003) to measure satisfaction and student's perceived performance. Iriberri et al. chose to adopt the Technology Acceptance Model (TAM), which has been widely used in the Information Systems field to determine the factors that lead to information systems usage intention (Davis 1989; Venkatesh & Davis, 2000), models how users come to adopt and use a technology. According to TAM, acceptance of technology is determined by how useful and easy to use the system is perceived to be by potential users. The principle constructs studied are perceived usefulness, or "the degree to which a person believes that using a particular system would enhance his or her job performance," and perceived ease-of-use, or "the degree to which a person believes that using a particular system would be free from effort" (Figure 1). TAM states that these two factors directly influence the intention that potential users may have to using the system.



In this study, we build on previous studies and focus on assessing students' perspective regarding the usefulness, ease of use, and the benefits derived from the ERP exercises and compared these perspective based on students' prior working experience and students' prior working experience with an ERP system. We argue that the likelihood of students' usage of the ERP system is an indication of their perception of the value of the use of ERP system of the effectiveness of the training they received.

## METHODOLOGY

In order to evaluate the effectiveness of this endeavour, we chose to evaluate the students' perspective regarding the usefulness, ease of use, and the benefits derived from the SAP exercises. This study was conducted in the fall semester of 2013 and again in the spring and summer semesters in 2014 in several upper division undergraduate Management Information Systems classes. The data was collected from eight sections of the course that was taught by three different faculty members. The survey results were examined, and several cases were removed where there was a pre-test survey without a related post-test survey or vice-versa. This was done to ensure that we only utilized matched pairs of surveys for our analysis. In order to encourage a high level of participation, points were awarded for the completion of both surveys, and the 78% response rate was quite good. These efforts resulted in obtaining 230 valid paired cases.

Using the data that we collected, we sought to compare our students' perception on the functionality of the SAP ERP software before and after they received training and used the system. The approach we utilized was to conduct a pre-test survey before we presented the SAP exercises, and we conducted a post-test survey afterwards. Both surveys were the same, and they contained 21 questions. The first seven questions related to demographic data and the remaining 14 questions collected responses on a five-point Likert scale related to the students' perceptions of the SAP ERP. The responses to those 14 questions were re-keyed so that Strongly Disagree was scored as a "1" and Strongly Agree was scored as a "5". Frequencies were calculated for the demographic questions using SPSS. For the numeric Likert scale results, a Matched Pair T-test in SPSS was utilized to examine the differences between the means of the paired data sets to determine if they indeed departed significantly from 0. This was a two-tailed test so one half of the *p* values (significances) were considered as related to the positive tail of the distribution.

The demographic data was examined in order to determine if those factors had a meaningful influence on the results that were we seeing. In this next phase, we split the data into two groups: those who had some experience with an ERP system and those who did not. We performed the same t-tests as before on each of the two subgroups and we examined the differences. We also did the same type of comparisons on those who had some work experience versus those who had none.

## ANALYSIS OF RESULTS

The frequencies as reported in SPSS are as follows:

<b>Table 1</b> <b>Q1) How many years have you been using a computer?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<Unanswered>	1	.4	.4	.4
	0-5 years	7	3.0	3.0	3.5
	11-15 years	96	41.7	41.7	45.2
	16-20 years	51	22.2	22.2	67.4
	20 years or more	9	3.9	3.9	71.3
	6-10 years	66	28.7	28.7	100.0
	Total	230	100.0	100.0	

<b>Table 2</b> <b>Q2) How many years of full-time work experience do you have?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2 years	58	25.2	25.2	25.2
	10 or more years	12	5.2	5.2	30.4
	3-5 years	40	17.4	17.4	47.8
	5-10 years	25	10.9	10.9	58.7
	None	95	41.3	41.3	100.0
	Total	230	100.0	100.0	

The frequency data for Q3) “Which of the following do you use more than once a week?” has complex and multi-faceted answers but those results can be made available upon request.

<b>Table 3</b> <b>Q4) What is your major?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Accounting	62	27.0	27.0	27.0
	Computer Information Systems	15	6.5	6.5	33.5
	Finance	26	11.3	11.3	44.8
	Human Resource Management	7	3.0	3.0	47.8
	Management	42	18.3	18.3	66.1
	Marketing	46	20.0	20.0	86.1
	Other	32	13.9	13.9	100.0
	Total	230	100.0	100.0	

<b>Table 4</b> <b>Q5) What is your gender?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	107	46.5	46.5	46.5
	Male	120	52.2	52.2	98.7
	Not to be identified	3	1.3	1.3	100.0
	Total	230	100.0	100.0	

<b>Table 5</b> <b>Q6) What is your age?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-20	32	13.9	13.9	13.9
	21-25	161	70.0	70.0	83.9
	26-30	25	10.9	10.9	94.8
	31-40	10	4.3	4.3	99.1
	41-50	1	.4	.4	99.6
	51 or more	1	.4	.4	100.0
	Total	230	100.0	100.0	

Table 6 Q7) How many years have you used an ERP system (i.e. SAP or PeopleSoft) before?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<Unanswered>	2	.9	.9	.9
	1-2 years	36	15.7	15.7	16.5
	3-5 years	16	7.0	7.0	23.5
	5-10 years	2	.9	.9	24.3
	More than 10 years	1	.4	.4	24.8
	None	173	75.2	75.2	100.0
	Total	230	100.0	100.0	

Many of the responses in the overall data indicated that there were very few differences in the student's perceptions between the pre-test and the post-test. However, in several of the questions there appeared to be a positive change in perceptions in several key factors in the post-test when compared to the pre-test. This would likely indicate that this change was produced as a result of the SAP exercises which were the intervening treatment. We examined those questions where there was a meaningful level of positive change (0.26 or more) between the means for the pre-test and the means for the post-test. We then focused our attention on those questions where the significance of the two-tailed  $p$  values was 0.05 or less within a 95% confidence interval. The relevant data based on the 5 point Likert scale associated with those selected questions are as shown in Table 7. All of the other questions had a small change between the pre-test and the post-test and those differences were not considered as statistically significant.

Table 7 Positive Changes in Perception					
Q#	Question	Pre Mean	Post Mean	Difference	Sig.
8	SAP ERP is functional	3.68	4.06	0.38	0.000
11	Overall, I find SAP ERP useful	3.72	3.98	0.26	0.003
12	I find SAP ERP easy to use	3.11	3.39	0.28	0.005
13	My interaction with SAP ERP is clear and understandable	3.15	3.57	0.42	0.000
19	The SAP ERP tutorials help me understand how to work with SAP ERP	3.67	4.12	0.45	0.000

Question number 8 was "SAP ERP is functional" and the results were as follows: the pre-test mean was 3.68 on the 5 point Likert scale and the post-test mean was 4.06. This increase of 0.38 points could be considered as an actual difference in the means of the two distributions within a 95% confidence interval since the two-tailed significance was less than 0.000.

In a similar fashion, the results for question number 11 "Overall, I find SAP ERP useful" increased from 3.72 to 3.98 with a significance level of 0.003 (two-tailed).

Question number 12 “I find SAP ERP easy to use” changed from 3.11 in the pre-test to 3.39 in the post- test. This increase of 0.28 had a two-tailed significance level 0.005.

For the 13<sup>th</sup> question was “My interaction with SAP ERP is clear and understandable” the results increased from 3.15 to 3.57 and this difference of 0.42 had an associated  $p$  value of less than 0.000.

Question 19 “The SAP ERP tutorials help me understand how to work with SAP ERP” provided the largest increase of 0.45 (from 3.67 to 4.12) with a significance of less than 0.000.

The next phase of the data analysis involved consideration of the demographic information collected in the first 7 questions. We sought to determine what influence those factors might have on the responses in the remaining 14 questions. To meet this objective we focused on two aspects of a student’s background that we believed would be the most likely factors to influence their attitude and understanding of the SAP system. Since there was some overlap in these, we considered them individually. The first factor was whether or not the person had any work experience. The approach we utilized was to split the data into two groups: one group (95 cases) with no work experience and the other (135 cases) with some work experience. We then conducted the same type of paired sample t-tests for each group and then we considered the differences in their responses. Only three questions provided data that met the significance criteria we had established in both of the samples as shown in Table 8.

<b>Table 8</b> <b>With and Without Work Experience (one-tail <math>p</math> values &lt; 0.007 )</b>		
Question	Difference between the means (no work)	Difference between the means (with work)
8) SAP ERP is functional	0.42	0.35
13) My interaction with SAP ERP is clear and understandable	0.44	0.42
19) The SAP ERP tutorials help me understand how to work with SAP ERP	0.43	0.47

These results seemed to indicate that the lack of work experience was coupled with more of an increase in the feeling of usability of SAP compared to those with work experience. Conversely, the presence of work experience seemed to increase the perception of value for the SAP tutorials.

The next factor under consideration was whether the individual had some experience with an ERP system such as SAP. The break down was 57 people with ERP experience and 173 with no ERP experience. We then conducted the same type of paired sample t-tests for each group as before, and then we considered the differences in their responses. Four questions provided data that met the significance criteria we had established in both of these samples:



**Table 9**  
**With and Without ERP Experience (one-tail  $p$  values < 0.007 )**

Question	Difference between the means (no ERP)	Difference between the means (with ERP)
8) SAP ERP is functional	0.37	0.38
13) My interaction with SAP ERP is clear and understandable	0.35	0.64
19) The SAP ERP tutorials help me understand how to work with SAP ERP	0.42	0.57
20) I would use more SAP ERP tutorials to work on other SAP ERP modules	0.27	0.44

Experience with an ERP did not seem to alter the individual's perception of SAP in regards to functionality, but it did have a large impact on their view that their interactions with SAP were clear and understandable. Favorability toward the SAP tutorials was stronger among those with prior ERP experience (Table 9).

### CONCLUSION

We conducted two surveys (pre- and post-treatment) to compare our students' perception on the value of the SAP ERP software before and after they received training and used the system. The study was conducted in the fall semester of 2013 and again in the spring and summer semesters in 2014 in several upper division undergraduate Management Information Systems classes. The data was collected from eight sections of the course that was taught by three different faculty members. This resulted in obtaining 230 valid paired cases for analysis.

Findings indicate that participants have positive perceptions on the usefulness, ease of use, and intention to use the ERP system. Also, the findings indicate that overall the training material and exercises they used helped them appreciate the functionality of the system, its usefulness, and its ease of use.

In terms of the prior work experience of the participants, we split the data into two groups: one group (95 cases) with no work experience and the other (135 cases) with some work experience. The result of the paired sample t-tests seemed to indicate that the lack of work experience was coupled with more of an increase in the feeling of usability of SAP compared to those with work experience. Conversely, the presence of work experience seemed to increase the perception of value for the SAP tutorials.

The next factor under consideration was whether the individual had some experience with an ERP system such as SAP. The break down was 57 people with ERP experience and 173 with no ERP experience. The result of the paired sample t-tests seemed to indicate that Experience with an ERP did not seem to alter the individual's perception of SAP in regards to functionality, but it did have a large impact on their view that their interactions with SAP were clear and understandable. Favorability toward the SAP tutorials was stronger among those with prior ERP experience.

Our findings suggest that after being introduced and using an ERP system, students understand the usefulness of these systems and their relevance of having used them to support current or future jobs they hold. Their intention to use the system is positive. This represents an important finding given the widespread use of ERP systems in the business world and the need of employers to recruit newly graduates with the necessary skills to fulfil current and future needs. We found this first experience integrating SAP ERP into our core curriculum to be a positive experience.

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# **SERVICE LEARNING AS MARKETING PEDAGOGY: PRACTICAL, THEORETICAL AND INSTITUTIONAL PERSPECTIVES**

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## **ABSTRACT**

*The successful incorporation of service learning into business curriculum is not something new. However, when it comes to service learning, the field of marketing seems to lag behind other business disciplines, particularly management, as demonstrated by the number of books and academic publications on the topic. This paper reviews the state of service learning in higher education and in the academic field of marketing, presents a case study of service learning in a marketing course, and addresses the practical, theoretical and institutional perspectives of service learning. It is designed to enhance educators' practical skills in designing and implementing service learning projects, as well as deepen their understanding of service learning at the theoretical and institutional levels. The combination of these three perspectives-the practical, theoretical and institutional-provides a broad approach to service learning with experiences, strategies, and recommendations that can be applied to any marketing class or discipline within higher education.*

## **INTRODUCTION**

The successful incorporation of service learning into business curriculum is not something new. However, when it comes to service learning, the field of marketing seems to lag behind other business disciplines, particularly management, as demonstrated by the number of books and academic publications on the topic. The purposes of this paper are to review the state of service learning in higher education and in the academic field of marketing, present a case study of service learning in a marketing course, and to address the practical, theoretical and institutional perspectives of service learning.

First, the state of service learning in higher education and, specifically, in the academic field of marketing, will be reviewed. Then, by providing a review of recent publications, service learning as a marketing pedagogy will be put into a broader perspective by discussing the practical, theoretical, and institutional perspectives. Then, a service learning project implemented in a Strategic Electronic Marketing class at the author's University (here after referred to as "the University") is described and put in the context of those perspectives. This paper will enhance marketing educators' practical skills in and implementing service learning projects, as well as deepen their understanding of service learning at the theoretical and institutional levels.

## THE STATE OF SERVICE LEARNING TODAY

Service learning is a pedagogical technique combining academic learning with community service (Klink & Athaide, 2004). Specifically, service learning “is a pedagogical process where by students participate in course-relevant community service to enhance their learning experience all service-learning experiences involve an integration of course material with volunteer service and some form of reflection on or reporting of the outcomes” (Petkus, 2000, p. 64). It can provide a very valuable learning experience by taking classroom content and applying it in a real-life situation. Not only do students use their classroom-acquired knowledge and skills, they also help community members in the process.

Munter (2002) describes service learning as a “new” approach to higher education (versus the traditional teacher-centered lecture pedagogical style) where “service-learning courses provide opportunities for developing a sense of purpose and a collective solidarity with the communities in which our universities are embedded” (p. 154). Munter (2002) contends that students need new skills and modes of thinking because of our knowledge-based and multicultural society today, and that service-learning can provide that by offering a learner-centered approach, interaction and collaboration, responsiveness to local communities, by building a community of learners, and providing lifelong learning. Service-learning has central to its approach student empowerment and community empowerment.

A variety of benefits of service learning exist. Communication is built as students work with diverse groups of people, reports and reflection papers enhance professional writing skills, cohesion is taught as students work with other students and professionals to achieve common goals and networking skills are learned as students deal with and build relationships with the contacts they make during these projects (Tucker, McCarthy, Hoxmeier, & Lenk, 1998). Service learning activities also have the opportunity to improve interpersonal skills in the work setting and allow students to use analytical tools and concepts to solve a wide range of unstructured problems (Frueh, Hobbs, Kenderdine & Michaelsen 2000).

Service learning projects have some common characteristics. First, the project should consist of a learning experience tied to the course. For example, Strategic Electronic marketing students might design a web marketing plan for a non-profit agency. Second, service learning projects should serve a community non-profit agency or for-profit organization and reflection should connect the learning and service together (McCarthy & Tucker, 2002). Service learning helps develop fundamental skills that will be useful in students’ future career choices. It also increases motivation and contextual understanding of the students’ class material, helps students overcome negative stereotypes of working with people, increases students’ sensitivity to moral issues, and improves students’ test scores (McCarthy & Tucker, 2002). In addition, service learning projects are versatile, can be tailored to the classroom material, and can be generated by professors, students, or organizations (Tucker et al., 1998).

While service learning has certainly grown in popularity in the last several decades, it still remains to be a pedagogy that is underutilized. Demb and Wade (2012), in a survey of faculty activity and attitudes toward outreach and engagement, found that faculty in institutions of higher education participated in service learning the least amount of time compared to other forms of outreach and engagement (community-based research, outreach-oriented professional service, engagement-oriented professional service, and public service), with only 19.7 percent of faculty participating in service learning. In addition, business faculty, when clustered with faculty in pharmacy, biological sciences, engineering and architecture, represent a “mid-level” group in terms of number of hours participating in engagement activities. Barriers to the successful implementation include faculty and organizational resistance, lack of an institutional infrastructure to support and encourage service learning effort, and demonstration of the relevance of service

learning to business education (Kolenko, Porter, Wheatley, & Colby, 1996; Lamb, Swinth, Vinton, & Lee, 1998). Though some barriers have subsided over time as service learning as a pedagogy has improved, Kenworthy-U'Ren (2008) believes that workload issues and personal agendas for faculty are two barriers that continue to persist.

Despite the barriers, the use of service learning as a pedagogy continues to grow, particularly in marketing and the business disciplines. McIntyre, Webb and Hite (2005) surveyed marketing professors and found that about 81 percent participate in at least one form of service learning, including independent or group study, consulting, partnership, individual placement and optional placement. The authors also identified factors that influence faculty use of service learning. Specifically, faculty engage in service learning because they believe positive student outcomes to result (e.g., problem solving, critical thinking) and when they perceive “facilitators” (e.g., time, resources) to be present. However, faculty do not believe that service learning participation is rewarded (e.g., promotion, tenure) nor are they motivated, through such factors as professional obligations or external community pressures, to participate in service learning.

Though the use of service learning as pedagogy may be limited in some disciplines and continues to grow, its value is well accepted by faculty in institutions of higher education. Godfrey, Illes and Berry (2005) present a critique of business education and propose that service learning as pedagogy can help overcome the weaknesses of business education. Specifically, Godfrey, Illes and Berry (2005) propose that business education is not cross-functional or holistic enough, does not emphasize deep theoretical knowledge, is limited in its view of humanity and human interactions, and focuses too much on shareholder wealth as its grounding morality. By providing reality, reflection, reciprocity and responsibility, Godfrey, Illes and Berry (2005) believe that service learning is an “antidote to the narrowness prevalent in B-schools” (Godfrey, Illes & Berry, 2005, p. 319).

Lester, Tomkovick, Wells, Flunker and Kickul (2005) examine service learning from multiple stakeholder perspectives. They found that three stakeholder groups—students, recruiters, and community service project supervisors—find value in service learning. For students, the value of service learning is in its ability to contribute to their practical skills and citizenship, and depends on the design and context of the service learning project. For recruiters, more value is placed on service learning when their companies promote social responsibility. For supervisors, more value is placed on service learning when they perceive students have higher desires to learn and demonstrate higher levels of responsibility. In a meta-analysis of 40 studies published between 1993 and 2010 (a variety of academic disciplines was represented in the sample), Yorio and Ye (2012) found that service learning has a positive effect on students’ understanding of social issues, personal insight and cognitive development.

Service learning as pedagogy is particularly beneficial for marketing. Service learning helps fill a community need by helping small and large for-profit businesses or non-profit organizations market products and services successfully, allows students to apply marketing skills to practical problems, and matches marketing students’ learning styles with experiential learning experiences (McIntyre, Webb & Hite, 2005). For example, Mottner (2010) found that students in a non-profit marketing course perceived service learning as being beneficial in increasing their knowledge of non-profit marketing, understanding of the difference between non-profit and for-profit marketing, developing marketing strategies for non-profit organizations, and using marketing tools.

Given the perceived value of service learning and its growing use in the marketing field, academicians should take a careful look at the practical, theoretical and institutional perspectives of service learning when considering its use. The combination of these three perspectives-the practical, theoretical and institutional-provides a broad approach to service learning and considers experiences, strategies, and recommendations that can be applied to any marketing class or discipline within higher education to increase the probability of success in its use. The practical, theoretical and institutional perspectives that are addressed in this paper are listed in the Table.

<b>TABLE</b> <b>Service Learning (SL) Perspectives</b>		
<b>Practical</b>	<b>Theoretical</b>	<b>Institutional</b>
<b>Course/Project Design</b> <ul style="list-style-type: none"> <li>• Classroom activities</li> <li>• Course objectives</li> <li>• Project structure &amp; requirements</li> <li>• Planning considerations</li> </ul>	<b>Benefits of SL</b> <ul style="list-style-type: none"> <li>• For marketing majors in light of the nature &amp; purpose of marketing</li> <li>• Measuring student perceptions of the benefits</li> </ul>	<b>Institutional Support &amp;</b> <ul style="list-style-type: none"> <li>• Infrastructure</li> <li>• Routine operations to service SL</li> <li>• Identify SL partners</li> <li>• Facilitate &amp; manage collaborative agreements</li> <li>• Visibility &amp; promotion of SL activities</li> </ul>
<b>Implementation Strategies</b> <ul style="list-style-type: none"> <li>• Recruiting and screening organizations to participate</li> <li>• Commitment, expectations &amp; communication</li> <li>• Scope of project</li> <li>• Adjust coverage of course material and for contingencies</li> </ul>	<b>Learning Outcomes</b> <ul style="list-style-type: none"> <li>• Reality</li> <li>• Reciprocity</li> <li>• Reflection</li> <li>• Responsibility</li> </ul>	<b>Consistency with a University's Strategic Goals</b> <ul style="list-style-type: none"> <li>• Reward innovative teaching &amp; community involvement</li> <li>• Support faculty research on SL</li> </ul>
<b>Impact of SL</b> <ul style="list-style-type: none"> <li>• Learning through reflection</li> <li>• Other measures</li> </ul>	<b>Kolb's Learning Abilities</b> <ul style="list-style-type: none"> <li>• Concrete experience</li> <li>• Reflective observation</li> <li>• Abstract conceptualization</li> <li>• Active experimentation</li> </ul>	<b>Ensuring Success Across Campus</b> <ul style="list-style-type: none"> <li>• Campus Compact</li> <li>• Dissemination of SL research</li> <li>• Faculty Fellows Program</li> </ul>

### SERVICE LEARNING AS MARKETING PEDAGOGY

Businesspersons are members of the communities in which they live and as citizens they attempt to meet the needs of that community by providing goods and services (Fleckenstein, 1997). With that said service learning can help to enhance social responsibility and build better employee skills and ethics and, in turn, build better business and better communities. Not only does service learning provide an understanding of community responsibility but it also develops students' skill base, reinforces classroom content, expands the students' knowledge beyond the classroom, puts the students in touch with the community and their needs, and gives them a competitive advantage in their job searches (Tucker et al., 1998). Also, benefits of service-learning programs extend to the community when the agencies that participate are better able to serve their clients (McCarthy & Tucker, 1999). Marketers will play a substantial role in developing, pricing, promoting, and distributing these products and services so it is important that students possess these skills.



Within the last two decades, service learning as marketing pedagogy has received some attention in the literature. Easterling and Rudell (1997) first addressed service learning in marketing education by discussing the rationale, evolution and benefits to be derived from its use. These researchers discuss ways in which service learning can be incorporated into marketing curriculum. While service learning was being implemented in the marketing classroom (e.g.,

Walsh, 2002), few studies that focused on service learning as marketing pedagogy were yet published.

Petkus (2000) extends Easterling and Rudell (1997) and presents an experiential learning framework for marketing faculty to use as a guide when planning, designing, implementing and evaluating a service learning course. In addition, Petkus (2000) suggests implementation strategies for a variety of marketing classes and presents a case study of service learning in a consumer behavior course.

Since Petkus (2000), several marketing studies have been published, many of which present case studies of the use of service learning in a particular marketing course. Wiese and Sherman (2011) discuss Kolb's (1981, 1984) experiential stages in the context of a case study of a service learning project combining environmental studies and marketing courses. Metcalf (2010) describes the creation of a project-based capstone marketing course that provides marketing students with an international community service learning experience. Furlow (2010) describes a graduate marketing course where students developing a promotion strategy built a temporary website, "Shop to Rebuild," to assist businesses rebuild after Hurricane Katrina. Walsh (2002) describes a number of service learning projects undertaken by an undergraduate marketing club. Braunsberger (2007) presents a case study of marketing students in principles of marketing and marketing management working to promote a non-profit, Friends of the Animal Shelter, founded by marketing faculty. Other case studies include service learning in personal selling (Hagenbuch, 2006), principles of marketing (Klink & Athaide, 2004), sales (Shaw, 2007), and non-profit marketing courses (Mottner, 2010).

McIntyre, Webb and Hite (2005) surveyed marketing professors and found that about 81 percent participate in at least one form of service learning, including independent or group study, consulting, partnership, individual placement and optional placement. Though this is a high percentage of participation by marketing professors, work still needs to be done to help marketing academicians successfully integrate service learning into curriculum and realize its full potential as pedagogy. For example, no study has taken a broad look at service learning as marketing pedagogy and considered the practical, theoretical and institutional perspectives. Next, a review of the practical, theoretical and institutional perspectives is provided. Then, a service learning project is described and then put in the context of those perspectives. A comprehensive assessment of this project and future projects will help ensure the effective implementation of service learning in marketing curriculum.

## **THE PRACTICAL PERSPECTIVE**

### **Course/Project Design**

Much of the faculty reluctance to implementing service learning in their courses comes from time and coordination demands, lack of support from administration, pressure to publish, challenge of evaluating and grading the students work, and inexperience with non-traditional teaching methods (McCarthy & Tucker, 1999). Effective course and service learning project design can help alleviate these faculty concerns.

To eliminate the negative perception of the time constraints involved in service learning, faculty members can incorporate some of the projects in to their class time. Topics like the organization's overview, objectives of the project, and tasks involved work well for a class discussion. Faculty can also arrange trips to the organization during class time. The assignment of student teams will also help break down some of the work needing to be completed (McCarthy & Tucker, 2002).

In order to increase departmental support, faculty can coordinate service learning activities at the department, college, and university level. Departments can work together to develop several courses that would partake in service learning activities and then promote these courses to students particularly interested in service learning. In addition, by having departments work together, this would allow for service learning to take place without having these activities becoming too saturated and overbearing for individual faculty members.

In addition to faculty concerns, effective course and service learning project design can help alleviate student concerns with service learning projects. There will be students who have never participated in service learning projects before, have negative perceptions, or lack the motivation to participate. A major concern is that a student might not be committed to and responsible in the project because she does not value the project or cause (McCarthy & Tucker, 2002). One way to increase commitment and excitement for these types of projects is to create groups, have class discussions, and reassure students that they are capable of such a task. In a team setting, it is likely that at least one member has participated in a community or service learning experience, and novice group members could observe their behavior. In the classroom discussions, the faculty member could ask class members to talk about any previous experience they may have had related to service learning (McCarthy & Tucker, 2002). McCarthy and Tucker (2002) found that when the faculty member took the time to give lectures about service learning and implemented a project that tied the concept to the course work; this had made a significant impact in the way students viewed and what they got out of participating in a service learning project. Students were more likely to engage in the service learning activity when they perceived the project's importance and when they experienced an emotional connection with that particular project (McCarthy & Tucker, 2002). Faculty can discover and uncover the prominence of the need, clarify its nature, and help deliver a sense of responsibility. When the faculty member presents this to the class, students' perceptions that they are capable of helping people in need and their sense of responsibility and self-efficacy in their own capability to help others are increased (McCarthy & Tucker, 2002).

In addition, a faculty member should incorporate course objectives and material about the impact of community service, in general, and specific to the community in which the university resides, addressing the community's needs. Steiner and Watson (2006) encourage faculty to establish and promote course objectives related to civic values and responsibilities. Steiner and Watson (2006) examined syllabi of business courses taught at universities noted for their service learning programs and courses. Syllabi either treated service learning projects like any other assignment (almost half) or did not emphasize civic responsibility and community involvement in the course objects (82 percent), suggesting that "the emphasis in most service learning courses is on the course content and not on the internalization of service and civic duty into a student's value system" (Steiner & Watson, 2006, p. 432). An example of a civic-related goal is "to provide you with experiences and knowledge so that as you progress in your careers in business or else where you may more effectively participate in your relevant communities" (Steiner & Watson, 2006, p. 429). The lecture and/or discussion should highlight ways to meet a community's needs. Students can be critical factors in a community's success (McCarthy & Tucker, 2002).



Some students may feel reluctant if required to participate in a service learning project as part of a course. Faculty members can alleviate this reluctance by tying the project to the course content and presenting the project not as a volunteer experience but as an additional way to learn the course content. "It is an experiential exercise with learning objectives that reinforce course content" (McCarthy & Tucker, 2002, p. 570). A service learning project should be kept fairly simple and the faculty member should emphasize that the learning outcomes will be associated with the course content (McCarthy & Tucker, 2002).

Papamarcos (2002) suggests several other important guidelines for planning a service learning project: the project must encompass the course's knowledge base and learning objectives, it must involve service to the community in a socially responsible manner, it should be challenging, it should be continuously energizing, it should have an impact, it should be possible while meaningful, an organizing framework for the project should be obvious, and the project's objectives must be defined clearly so that all know when they have been accomplished.

### **Implementation Strategies**

Several authors have presented guidelines or suggestions for implementing service learning projects. For example, Papamarcos (2002) suggests that interim steps with deliverables should take place throughout the project, and that the project must be able to be completed within a specified time period (e.g., a semester).

An important factor leading to the success of a service learning project is the faculty member's ability to screen and select appropriate organizations. There are many prospects in every community. Inviting local business professionals to serve as project partners is not as difficult as it seems. A university's alumni office or professional assistance organization can access professionals in various business areas who are willing to help students connect the technical aspects with the civic responsibility (Zlotkowski, 1996). There are many opportunities for service learning activities at both for-profit and non-profit agencies, although non-profit agencies tend to be more receptive to students with limited skills because of their demand for volunteer labor. If the organization, project, and the classroom material relate to one another that is a strong start. The non-profit contact person should also be able to spend time with the students, the location of the organization should be accessible and safe, and the non-profit organization should implement student recommendations. With any project, the instructor and the participating organization should come to agreement on the expectations of the project (Klink & Athaide, 2004).

Implementation of a service learning project will go much more smoothly when the faculty member and participating organization are both committed to the project and have clear expectations up front, perhaps articulated in a cover letter (Berry & Workman, 2007). When the faculty member is having problems getting an agency to commit to a project and follow through, they can consider writing up an agreement about the expectations and deliverables and then have the service partner sign the agreement or memo of understanding (Klink & Athaide, 2004) or a client-student contract (Berry & Workman, 2007). Communication between the faculty member(s) and other participants (e.g., the contact at a participating organization) should take place throughout the service learning project (Wiese & Sherman, 2011).

Wiese and Sherman (2011) suggest faculty members narrow the scope of the project so students are not overly frustrated or challenged and screen the project for feasibility. The authors also recommend that faculty adjust the order in which topics are covered throughout a semester to mirror activities of students working on the project. Finally, the authors suggest that faculty be prepared to manage contingencies by being flexible and making adjustments when necessary (e.g., when participating organizations are not implementing well).

## **Impact of Service Learning**

Service learning impacts students in many ways. Through reflection, learning is enhanced by students connecting the service experience to the academic theories and concepts they are studying in a class (Ikeda, 2000). In addition, service learning enhances critical thinking skills (Zlotkowski, 1996), develops leadership skills (Friedman, 1996), fosters social responsibility (Kolenko et al., 1996), and enhances self-efficacy and beliefs about making a difference, helping

others, and duties as citizens (McCarthy & Tucker, 1999). Research has shown a host of other impacts as well (see Toncar, Reid, Burns, Anderson & Nguyen, 2006).

Assessing impact in a service learning course entails students reflecting upon the experience, either through class discussions or a written paper(s) or journals. Structured, intentional reflection is essential for two reasons. First, reflection is typically included in the definition of service learning and distinguishes it from other forms of experiential learning. Second, reflection enhances student learning by connecting the service experience to the academic theories and concepts (Ikeda, 2000). Structured reflection is “a thought fully constructed process that challenges and guides students in (1) examining critical issues related to their service learning project, (2) connecting the service experience to coursework, (3) enhancing the development of civic skills and values, and (4) assisting students in finding personal relevance in the work” (Campus Compact, 2014b).

Requirements for the reflection paper may outline the specific areas or questions a student should address to guide her reflection, or may ask a student to explore issues in a free-form journal. A faculty member may choose to use a rubric to grade the reflection paper, including such criteria as Follows Directions, Describing the Civic Engagement/Service Learning Activity, Insights and Understanding, and Personal Development/Growth.

## **THE THEORETICAL PERSPECTIVE**

### **Benefits of Service Learning**

In response to criticisms that business students are not ethically or socially aware enough, or that universities do not engage and respond to community and societal needs, Berry and Workman (2007) wrote that service learning “is a particularly relevant pedagogy for marketing classes because marketing as a discipline is concerned with a broad range of social causes. SL is an academically rigorous pedagogy that combines traditional course content with the opportunity for students to experientially use their classroom knowledge and theory in real-world settings. Student SL teams often undertake projects for community-based non-profit organizations, using their classroom knowledge to aid the organization” (Berry & Workman, 2007, p. 21). In fact, projects like those offered in service-learning environments generally match the learning styles of marketing students and therefore yield greater comprehension and retention (Easterling & Rudell,

1997). Further, Rudell (1996) suggests that marketing students gain important experiences with intangible products (such as services), a vital part of today’s economy. Berry and Workman (2007) describe the benefit that service learning “takes marketing students outside the narrow confines of the marketing silo” (Berry & Workman, 2007, p. 25).

Several studies address the benefits and learning outcomes in marketing pedagogy. In a survey of marketing students, Berry and Workman (2007) found that service learning enhances student learning outcomes and creates a memorable and significant learning experience for most students. Domegan and Bringle (2010) address social marketing and its compatibility with service learning as marketing pedagogy. These researchers discuss how social marketing can improve service learning for marketing graduates in preparing them to be life-long active citizens. Mari (2008) suggests that incorporating a service learning component into marketing doctoral programs to move them toward a transformative consumer research (TCR) orientation where research enhances the welfare of individuals and society.

Toncar, et al. (2006) develop the Service Learning Benefit (SELEB) scale that measures student perceptions of service learning experiences on four dimensions: practical skills, interpersonal skills, citizenship and personal responsibility. The SELEB is a valuable outcomes assessment tool. "Faculty can evaluate student perceptions of the service learning activities in their classes, assess the value of their service learning efforts from the view point of the students, and evaluate the extent to which the service learning activity contributed to the learning objectives of the course" (Toncar, et al., 2006, p. 235). The authors suggest that faculty can administer the SELEB prior to the service learning project, assign students to specific aspects of the service learning project that are consistent with their perceptions of the benefits that can be derived, and then periodically administer SELEB, continue to monitor perceptions, and make adjustments consistent with the feedback.

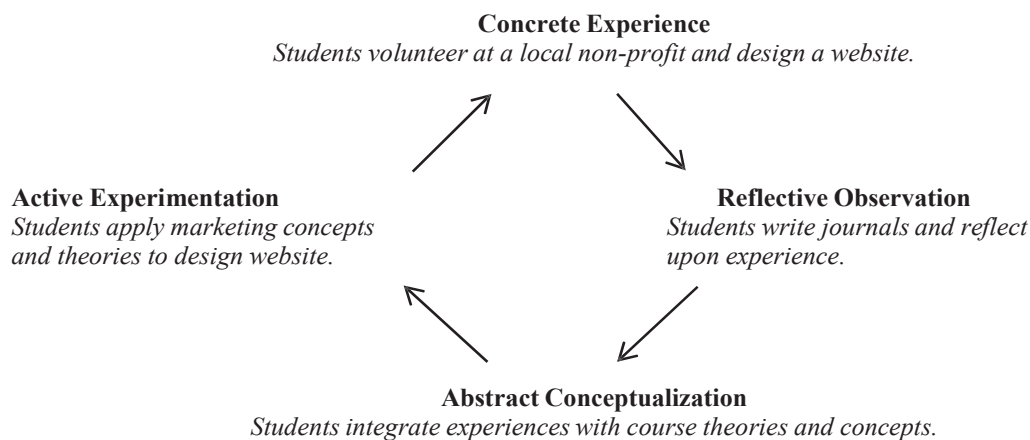
## Learning Outcomes

Godfrey, Illes and Berry (2005) propose four categories of learning outcomes for service learning (the four r's): reality, reciprocity, reflection and responsibility. *Reality* means that the service learning project allows students to apply marketing theories and concepts in a real-world setting and taking into consideration the challenges, opportunities, and constraints that exist in that setting. *Reciprocity* means that both the students and the participating organization benefit from the project. *Reflection*, as described above, allows students to think about what they learned, as well as what the participating organization and community gained from the project. *Responsibility* means that students become aware of their obligations to better themselves, the participating organization, and society as a whole by using their business skills, talents, and knowledge. In describing these outcomes, the authors provide examples and illustrate how each overcomes "narrowness in business education" (Godfrey, Illes & Berry, 2005, p. 315). In a survey of marketing students, Berry and Workman (2007) used the four r's framework to ask students about their changes in perspectives or awareness as a result of a service learning experience. The questions asked of the students were categorized along the four r's and an additional category assessed the students' overall experience with service learning. For example, students were asked, "Has your experience in this service-learning project changed your perception of your role as a socially responsible citizen?" (Responsibility). The authors found support for the four r's framework and evidence that service learning "created a memorable and significant learning experience" for most (Berry & Workman, 2007, p. 28). Faculty can certainly assess their students' understanding and learning that results from a service learning experience through this framework.

## Kolb's Learning Activities

Using Kolb's (1981, 1984) model, Petkus (2000) demonstrates how service learning can help students develop four learning abilities: concrete experience, reflective observation, abstract conceptualization and active experimentation. According to Kolb (1981, 1984), learning is most effective when students' progress through all these types of learning abilities. According to Petkus (2000), *concrete experience* occurs when students participate in volunteer service. When students reflect, either informally in discussions or formally in written assignments, *reflective observation* occurs. *Abstract conceptualization* occurs when students integrate course theories and concepts with their concrete experience. Finally, when students actively and deliberately apply those theories and concepts, *active experimentation* occurs. Adapted from Petkus (2000, p. 65) for the project in the Strategic Electronic Marketing class described here, the Kolb learning cycle, incorporating the four learning abilities, is illustrated in Figure 1.

**FIGURE 1**  
**Kolb's Learning Abilities**  
Adapted from Petkus (2000, p. 65)



Faculty should systematically plan students' progress through these four learning abilities to ensure that students complete the cycle of learning.

## THE INSTITUTIONAL PERSPECTIVE

### Institutional Support and Infrastructure

Much of the resistance to the successful integration of service learning into a university can be attributed to the absence of infrastructure for sustaining service efforts, including "routine operations of identifying potential agencies, assisting students with making contacts, maintaining and nurturing good relationships with agencies, and assisting faculty with designing service learning activities across the curriculum" (Lamb, et al., 1998, p. 639). So it is imperative that a university establish an effective and efficient infrastructure to support servicing learning activities.

Andrews (2007, p. 19-20) defines institutional characteristics as “dimensions of the institution that promote or inhibit the integration of service learning.” Given that service learning tends to be more time-consuming and complex to organize than other forms of faculty engagement, Demb and Wade (2012) suggest that targeted institutional support (infrastructure) could enable more faculty to be more involved. They suggest that institutions assist faculty with identifying community partners and develop standard patterns for collaborative agreements. “Institutions seeking substantial participation by faculty need to make those intentions clear through mission statements, reward system criteria and infrastructure support that either provides resources or helps create efficiencies of time” (Demb & Wade, 2012, 362-3). According to Andrews (2007), implementation of service learning into universities broadly takes one of three forms: 1) implementation by course section; 2) creation of an office of service learning; and, 3) formation of a service learning consortium. In most cases, the most effective infrastructure would include all three forms.

Visibility and promotion of service learning activities campus-wide are important to supporting service learning activities. At the University, a service learning committee was established in September 2002. Early that fall, the first organized service learning event was held on campus, with over thirty faculty members attending. During that academic year, less than 10 courses with a service learning component were offered on campus. Since then, service learning has grown to over 50 courses in 16 departments, including incorporation into both on-campus and

virtual courses. An annual campus-community service fair is held each fall to allow community agencies to establish partnerships with various departments and participate in service learning projects in classes. The university-wide service learning effort is housed within the center for Civic Leadership, an institute whose purpose is to provide educational programs and initiatives designed to enhance civic leadership capabilities among participants.

### **Consistency with a University's Strategic Goals**

Wiese and Sherman (2011) suggest that a service learning project should fit with university and departmental mission and values. Universities that reward innovation in teaching and community involvement are “more likely to provide the proper environment for faculty interested in integrating interdisciplinary, experiential, service learning into their courses” (Wiese & Sherman, 2011, p. 52). For example, the institution should support faculty members' efforts in showcasing and publishing their service learning work by providing time and resources to work on research, to travel to conferences, etc. This type of institutional support will exist when the university supports pedagogy as a form of research and encourage faculty to publish their service learning work, either as pedagogical work or as case studies.

### **Ensuring Success across Campus**

To ensure the success of service learning, not only within the marketing curriculum, but across campus, faculty and the institution can get involved with Campus Compact, a national coalition of more than 1,100 college and university presidents dedicated to campus-based civic engagement (Campus Compact, 2014a; Morton & Troppe, 1996). The organization “promotes public and community service that develops students' citizenship skills, helps campuses forge effective community partnerships, and provides resources and training for faculty seeking to integrate civic and community-based learning into the curriculum” (Campus Compact, 2014a). One of Campus Compact's initiatives is service learning, and the organization provides research, online tools, conferences, and other initiatives to help campuses create effective service learning



programs that meet academic and service goals.

An institution can also provide mechanisms by which published service learning research is shared and disseminated across campus. On-campus, interdisciplinary research conferences can bring faculty of different disciplines together to share service learning experiences. Other efforts might include journals or newsletters published periodically about service learning efforts on campus.

The University's Office of the Provost hosts the Service-Learning Faculty Fellows Program (PSLFFP) to provide selected faculty to gain an appreciation and understanding of service learning with the intent of integrating and applying this knowledge to the institution's curricular, research and service functions. Because the University has been formally designated by the Carnegie Foundation as an "engaged" institution, the University believes the continuing enhancement of service learning as an academic strategic theme is essential. The PSLFFP typically awards three fellowships a year. Participating faculty members are designated as Service-Learning Faculty Fellows and expected to participate in service learning through a professional development phase and an academic leadership phase. The academic leadership phase requires a faculty member to:

1. Present the purpose and practice of the service learning program and theme to internal and external audiences,
2. Teach at least one course that contains a service-learning component,
3. Provide primary support to the university Service Learning Committee for carrying out the annual Campus Community Service Event,
4. Assist with assigned service learning orientations and training sessions for faculty and staff,
5. Lead development initiatives that enhance student involvement in service learning and co-curricular course work and service,
6. Assist with service learning program evaluation and assessment activities, and
7. Work collaboratively with assigned community partners to identify issues and opportunities for student and faculty participation (University, 2014).

## **A CASE STUDY: SERVICE LEARNING IN A STRATEGIC ELECTRONIC MARKETING COURSE**

A service learning class was incorporated into a Strategic Electronic Marketing class at the author's University. The Strategic Electronic Marketing class explores how Internet technology is used to develop an e-business marketing strategy. Students in the class were primarily marketing majors and were fairly familiar with the study of business, as many have already taken previous courses in management and marketing. A service learning project was ideal to enhance students' understanding of the concepts taught in the class. Students were to design a web-marketing plan for a non-profit organization, the Arts and Inspiration Center, a program that extends the opportunity for those with memory loss to share thoughts, philosophy, creations and enjoyment through the avenue of the Arts. This program also allows the caregivers of those with memory loss to take care of their own needs by hosting those with memory loss for day-long sessions at a local church. The students were tasked with developing design suggestions for building a web site, a marketing strategy for building customer traffic to the site, expected outcomes and a marketing budget.

At this point in time, the Arts and Inspiration center needed help designing a website. Given this need, service learning was the appropriate pedagogy as students would apply their classroom learning by developing a web marketing strategy for the Arts and Inspiration center and be required to spend several contact hours at the non-profit organization. A reflection paper addressing academic and personal reflections and a presentation to the director of the non-profit organization was also a requirement for the project. Realizing that it can be detrimental to force students to participate in something they may find uncomfortable or unimportant, an individual term paper could take the place of the service learning project, but all 18 students chose to participate in the service learning project. Prior to their participation, students were required to sign a confidentiality form.

Half of the class attended a morning session where they visited with participants and enjoyed singing songs, doing exercises and painting (see Figures 2, 3, and 4). The other members of the class attended an afternoon session and entertained the participants with activities such as a puppet show. After each of these sessions a group discussion was held and students shared their thoughts, feelings, and ideas about the program.

**FIGURE 2**

**Students Created Artwork with Participants**

**This figure shows a student creating a work of art during a session at the Arts and Inspiration Center.**



**FIGURE 3**

**Students Participate in Drama**

**This figure shows students putting on a puppet show during a drama session at the Arts and Inspiration Center.**





**FIGURE 4****Students Exercise with Participants**

This figure shows students stretching during an exercise session at the Arts and Inspiration Center.



After completing their contact hours at the Arts and Inspiration Center, students designed a website and developed a web marketing plan that would promote the Center, driving prospective participants, volunteers, donors, and health care professionals to the website. Given the importance of understanding customers in order to craft a marketing message, the onsite participation of the students was critical for their project work. A student's grade was dependent on a group-marketing plan (50 percent), an oral presentation (20 percent), an individual reflection paper (20 percent), and a peer evaluation (10 percent).

The reflection paper addressed the academic and personal thoughts the students had about the project. The *academic* reflections addressed the non-profit's existing marketing efforts, the marketing concepts that were applied to assist the non-profit organization, and how a student's service learning experience may affect her career in marketing. *Personal* reflections addressed how the experience affected the student, others and the world in general. More specifically, students were asked to address the following questions: What were your feelings about the experience? How do you see yourself differently? Whom did you serve? What new impressions, insights or perceptions do you have? How could that apply to others in similar circumstances? What new questions do you have for the world? What is your preferred world? How should the world be different? What is one small practical step you could take to get closer to that ideal vision?

In addition to the reflection paper, informal feed-back from students provided in class discussions was valuable. Much excitement was created around the project because it was "different." Students had not generally been exposed to service learning before, but many had performed service projects. Placing students in groups alleviated some of the stress of having to come up with all the information on their own. Students believed they would be able to use their combined knowledge and skills to explore and create a project that would be meaningful to them. Also, having the students participate in the Arts and Inspiration program significantly enhanced the way they felt and viewed the project. They felt the importance of such a project and it really touched them on a personal level. The students actually had fun and they perceived the Arts and Inspiration Center as rewarding and important. Although work would need to be completed out of the classroom, students were able to interact and have discussion surrounding the project in class. When they had to work out of class, they were given a lot of flexibility with time requirements. Overall, the project was a success, the students were given information and clear expectations, and

the project was well coordinated with the Arts and Inspiration Coordinator so that both parties would benefit.

Overall, the Arts and Inspiration Center was a beneficial and enjoyable project in which students engaged. Many students were hesitant about participating at first, not knowing what to expect, but realized at the end that they had made a difference, learned more about organization, more about marketing and the Internet, and indicated that they would participate again. One individual commented on his group's ability to overcome the diversity of his group. Because of this project, his communication skills improved as he tried to communicate in a different way so that all group members could be understood. Other students realized that they learned valuable leadership skills specifically, that they could be the "driving force" that gets a project going in the right direction.

Because of their participation, students learned the importance of involvement with the organization as the basis for understanding the target marketing and developing an effective marketing strategy. Because the students applied the marketing concepts, many felt they had learned more and that they were more prepared for the work force. Although applying the concepts can be more difficult than just reading about the concepts in a textbook, students had fun with the project and felt more at ease about marketing and the growing use of the Internet. Some students felt after this project that they would look specifically at the career in internet marketing. One student said, "To tell you the truth, internet marketing seems like a career option that I will look into extensively."

In terms of Kolb's (1981, 1984) model (Petkus, 2000), the author believes that students progressed through all four types of learning abilities. Specifically, *concrete experience* occurred when students spent time in the center, interacting with participants and leading and participating in exercise, music, and drama activities. *Reflective observation* occurred when students shared their thoughts, feelings, and ideas about the experience in class discussions and they completed their reflection paper. *Abstract conceptualization* occurred as students designed a website and developed a web marketing plan, and then presented those recommendations in a written paper and orally. Having a better understanding of the types of people the program serves, as well as the director and volunteers of the program, guided their recommendations for designing a website and web marketing plan that would allow the Arts and Inspiration Center to attract more participants, recruit more volunteers and donations, and gain support of health care professionals. Finally, *active experimentation* occurred when students applied the marketing concepts of target marketing and marketing strategy and, in turn, realized that they were more prepared for and excited about their career in marketing, particularly in internet marketing. In addition, many indicated that the service was a fulfilling experience that they would likely participate in again. The four r's framework described above (reality, reciprocity, reflection and responsibility) was not used in designing or assessing the learning that took place from this service learning project, but it certainly provides an alternative method by which to structure a reflection discussion or assignment.

With respect to the institutional perspective, the University provides a good level of support for faculty and their service learning activities. While the author was responsible for many of the routine operations and client collaboration in this service learning project, the University does reward and support faculty research on and participation in service learning. In addition, the author has attended two Campus Compact conferences on service learning (one which was hosted by the University).

## CONCLUSIONS

Previous research on service learning has taught marketing academics much about this pedagogical technique, but there is still work to be done. Putting service learning into a broad context and considering the practical, theoretical and institutional perspectives should be done while planning and implementing a service learning project. It is the author's hope that the

perspectives presented here will help ensure future success in service learning projects in marketing pedagogy. The specific service learning project described in this research was deemed a success because it considered and incorporated many of the components of the broad approach to service learning presented in this paper. Of course, improvement can always be achieved and the author will continue her service learning efforts and strive to make each experience better for her, the students, her institution, and the pedagogy of marketing.

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## THE CLOCK IS TICKING-AN ANALYSIS OF TIME SPENT ON ONLINE ASSIGNMENTS

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### ABSTRACT

*This paper examines the impact of various factors related to “time” in an online homework system on students’ performance in the introductory managerial accounting course. We use the tracking feature of McGraw-Hill’s Connect homework management system to retrieve students’ starting and submission time of online assignments to construct variables for empirical analysis. Specifically, the paper investigates the effect of time spent and online behavior (e.g., procrastinators vs. non-procrastinators) on students’ performance in online assignments and overall course grade. Our findings indicate that a web-based learning system can be used as a monitoring instrument for instructors to identify students in need of assistance in learning process.*

### INTRODUCTION

The amount of time students spend on coursework is of constant interest to educators and researchers because it is deemed to be an important measurement of student effort. It is a common belief that effort, along with other factors, is an important determinant of student performance. When a student comes to educators asking about how to improve course performance, the question normally asked is “how much time did you spend studying?” This popularly used proxy for effort has been extensively investigated in educational research.

Earlier research relies heavily on self-reported data that reflect students’ perceptions of effort or time spent, rather than objectively-measured effort, in learning activities (Rich, 2006). Recent advances in instructional technology enable researchers to access data capturing the actual time students spend online. For instance, the tracking features of web-based learning platforms (e.g., Blackboard) have made it possible for instructors to retrieve the real time that students spent online during a specified period of time. Regardless of data collection methods, findings of previous literature indicate mixed results concerning the association between student performance and effort, measured by duration of time spent in studying. Thus whether extra time or effort from students enhances or harms performance remains unclear (Rich, 2006).

The objective of this paper is to examine the effect of time and time-related factors of online assignments on academic achievement in a face-to-face managerial accounting course offered in a regional public university in the Midwest. The instructor of this introductory managerial course adopted Connect, a web-based learning system offered by McGraw-Hill, as a required instrument for students to practice and submit homework assignments. The actual time points of a student’s online activities (e.g., starting time and submission time) were extracted to construct different variables linked to the assignment grades earned by the student. In addition to the effect of the duration of time spent on online assignments, this paper also examines the effect of a student’s behavior revealed by when online assignments are started and submitted.

This paper is an extension of a research project published by the same authors, which investigates the association between students’ performance on Connect assignments and over all course grades. In the same course setting, the focus of this paper is on the impact of a student’s

behavior related to time consumption and duration. The study adds important dimensions and implications to the understanding of the time students spend on online assignments. First,

objective rather than self-reported measurement of time was used, to address the self-selection bias associated with survey data. Second, the study empirically examines and provides a comprehensive view of the impact of multiple aspects of time factors on academic achievements. The third feature of this paper is that the availability of objective data to instructors provides a useful monitoring mechanism to identify students in need of assistance.

## **BACKGROUND**

The data for empirical tests were collected from a regional campus of a public university in the Midwest. Motivated by educational research, the instructor incorporated McGraw-Hill Connect, a web-based homework system, as a required assignment platform in the course “Introduction to Managerial Accounting” (MGMT 201). The students used the textbook “Introduction to Managerial Accounting”, 5<sup>th</sup> edition. Published by McGraw-Hill, the text book was written by Brewer, Garrison, and Noreen. Other than online reading and homework assignments, the course followed the format of a traditional lecture class, and used in-class exams to assess learning objectives. All of the exams in this course were closed-booked and pen-paper based.

The Connect assignments include two parts, reading assignments to prepare students for subsequent lectures and homework assignments to improve students’ problem-solving skills. Reading assignments, due before class on the lecture day, tested students on the terminology and equations from the chapter. Students were given one attempt to complete the reading assignments. Although hints or other online help were unavailable, no time limit was imposed on reading assignments, so students had ample time to look up answers from the textbook. On the other hand, the homework assignments consisted of exercises that required skills in solving problems. Students were allowed to have two attempts, and the attempts were presented in the format of two separate assignments (e.g., Chapter 4A and Chapter 4B). Students were given only one attempt for each of the two assignments, but the two assignments were similar in content. In addition to unlimited time, homework assignments allowed a 2% numeric tolerance and no point deduction if students sought hints or online help via eBook and other resources. Each student was given the option to use the “check my work” feature once per item without penalty. Detailed feedback was available to students after submission, and a student who was unsatisfied with the first attempt (assignment A) grade had the opportunity to review the results of the first attempt and complete the second attempt (assignment B).

## **LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **Time Spent on Assignments**

As discussed, most of the previous empirical studies examine the impact of time spent on course work, a measurement for student effort, on student performance. The studies using self-reported data find mixed results on the association between academic performance and hours that students spend in studying. In the field of economics education, Gleason and Walstad (1988) fail to find results to support that study time is an effective determinant of learning outcome. Didia and Hsnat (1998) use data from the introductory finance course and findings indicate a significant but negative association between student performance and student effort, proxied by the number of hours students spend in studying per week. Also in the context of the introductory finance class,



Nofsinger and Petry (1999) fail to find pre-exam studying hours to be a statistically significant predictor of performance. The self-selection bias embedded with self-reported data may cause the contradictory results. Specifically, in the situation of self-reporting their effort, some

students performing poorly in the exam tend to report lower level of effort than actual as a self-defense mechanism. But others may be more likely to report higher level of effort to seek instructor's approval (Mac Iver, Sipek, & Daniels, 1991).

A similar stream of research employs objective data generated from computerized assignments. For instance, Johnson, Joyce, & Sen (2002) suggest that effort, measured by the number of attempts and amount of time spent, is a positive predictor of student grades. The effort in their study is measured by the amount of actual time recorded by the computer system that is designed to run in module mode. The module mode ensures a user's complete commitment to the quizzes during a session because it prevents all other computer applications from running. Using data collected from Blackboard, Calafiore and Damianov (2011) investigate the factors associated with academic performance in economics and finance online courses. Their findings suggest that longer time spent online is related to higher grades, but they also discuss that the time spent on online assignments only accounts for quantitative dimension of students' effort. For instance, both Rich (2006) and Calafiore & Damianov (2011) suggest that a student's GPA, an important measurement of intellectual ability, also captures time commitment and the quality of studying. That is, some students do not need more time to achieve the same learning objectives because they are able to absorb knowledge in a more effective and efficient way than others, while on the other hand students with lower ability may not study effectively (Rich, 2006; Calafiore & Damianov, 2011; Borg, Mason, & Shapiro, 1989). Additionally, such measurement does not consider the time that students spent offline on preparing for the assignments.

Nonis and Hudson (2010) summarize that previous research reports positive, negative, and insignificant relationships between study time and student performance and discusses how other factors such as study habits should be considered in explaining the mixed results (Nonis & Hudson, 2010).

In the current study, the context of the sample was considered when developing the hypothesis for empirical testing. Upon evaluating the overall maturity level of students, the instructor stated in the course syllabus that "the best way to use the online homework is to first attempt the problem by hand before entering your answers online". As previously discussed, the Connect homework (reading) assignments of the introductory managerial accounting course allowed students two (one) attempt(s). Thus students in the sample were expected to spend a fair amount of time offline to prepare for online assignments. Based on previous research, the authors predicted that the amount of time students spent online is not a determinant of assignment grade and developed the following hypotheses:

*H1a: The amount of time spent online is not statistically associated with a student's grade in Connect homework assignments.*

*H1b: The amount of time spent online is not statistically associated with a student's grade in Connect reading assignments.*

## The Effect of Procrastination

One of the unexpected results in the study by Nonis and Hudson (2010) suggests that crammers, representing the students who wait until the last minute to start working on projects, seem to perform better in their junior and senior years. Vacha (1993) suggests that “cramming” is an effective tactic for take-home exams and research papers. On the other hand, studies in economics theory suggest that procrastination comes with opportunity costs (e.g., Akerlof, 1991). Using data from internet-based tools, Caplan and Gilbert (2008) empirically investigate the costs associated with procrastination among college students. Their evidence indicates that non procrastinators are better performers than their procrastinating counterparts (Caplan & Gilbert,

2008). Based on the previous research, the following hypotheses were developed:

*H2a: A procrastinator is more likely to be a poor performer in Connect homework assignments. H2b: A procrastinator is more likely to be a poor performer in Connect reading assignments.*

## DATA AND EMPIRICAL RESULTS

The variable definitions are presented in Table 1. From the McGraw Hill Connect website, data was retrieved as to when each student started and submitted online assignments, and the duration between starting and submission times was computed to capture the actual time students spent on the online assignments. Following Caplan & Gilbert (2008), the variables START and SUBMISSION were constructed as proxies for procrastinators. START (SUBMISSION) is computed as the difference in minutes between an assignment’s submission deadline and the time students started (submitted) the assignment. Students with low START (SUBMISSION) value are likely to be procrastinators. A student’s homework or reading assignment score, as a percentage, was computed using a student’s points earned on the assignments as the numerator and the points available for the assignments as the denominator.

TABLE 1 VARIABLE DEFINITION		
Variable	Variable Type	Variable Definition
HOMEWORK SCORE	Numeric	Student performance in homework assignments on Connect
HOMEWORK DURATION	Numeric	The amount of time students spent on homework assignments (minutes)
HOMEWORK (START)	Numeric	The amount of time between students started the homework assignments and submission deadline (minutes)
HOMEWORK (SUBMISSION)	Numeric	The amount of time between students submitted the homework assignments and submission deadline (minutes)
READING SCORE	Numeric	Student performance in reading assignments on Connect (%)
READING DURATION	Numeric	The amount of time students spent on reading assignments
READING (START)	Numeric	The amount of time between students started the reading assignments
READING (SUBMISSION)	Numeric	The amount of time between students submitted the reading assignments and submission deadline (minutes)

**TABLE 2**  
**DESCRIPTIVE STATISTICS**

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
HOMEWORK SCORE	127	0.778	0.19	-1.71	0.215	3.532	0.427
HOMEWORK DURATION	127	1474.59	1674.958	2.353	0.215	7.606	0.427
HOMEWORK (START)	127	3126.528	2269.034	1.727	0.215	4.449	0.427
HOMEWORK (SUBMISSION)	127	1655.689	1448.779	2.13	0.215	9.018	0.427
READING SCORE	127	0.747	0.209	-1.124	0.215	1.447	0.427
READING DURATION	127	320.85	606.264	3.667	0.215	16.308	0.427
READING (START)	127	2535.826	1936.195	0.7	0.215	0.697	0.427
READING (SUBMISSION)	127	2182.089	1874.659	0.794	0.215	0.953	0.427

Table 2 presents the descriptive statistics. The data set contains 127 observations from five classes of the course titled “The Introduction to Managerial Accounting”. The average of homework (reading) score is 0.778 (0.747), with standard deviation of 0.190 (0.209). We performed sensitivity analysis noting the high standard deviation of the duration for homework (reading). In addition, the violation of normal distribution, as indicated by the Skewness and

Kurtosis statistics, called for the application of standardized procedure on all variables. And the standardized z-scores were used in empirical model testing.

Table 3 summarizes the empirical results for hypothesis testing. The set of Hypothesis 1 is tested using homework (reading) score as the dependent variable and homework (reading) duration as the independent variable. The results of the regression models indicated that homework (reading) duration is not a statistically significant predictor of homework (reading) score with a p-value of 350 (.275). The set of hypothesis 2 is tested using four regression models with assignment (reading or homework) score as the dependent variable, and the procrastination indicator (START or SUBMISSION) as the independent variable. The results suggest that a student with longer duration between starting time and submission deadline is more likely to be a better performer in the specific homework (reading) assignments. Also, a student with longer duration between submission time and submission deadline is more likely to be a better performer in the specific homework (reading) assignments. Based on the statistics, we concluded that both hypotheses 1 and 2 are supported.

**TABLE 3**  
**REGRESSION MODELS**

Model	Dependent Variable	Predictor	R-square	Unstandardized Coefficient	p-value
H1a	HOMEWORK SCORE	HOMEWORK	0.007	0.084	0.35
H1b	READING SCORE	READING	0.01	0.098	0.275
H2a -1	HOMEWORK SCORE	HOMEWORK	0.115	0.339	.000**
H2a -2	HOMEWORK SCORE	HOMEWORK	0.118	0.434	.000**
H2b -1	READING SCORE	READING (START)	0.238	0.488	.000**
H2b -2	READING SCORE	READING	0.228	0.478	.000**
<b>Notes:</b>					
Standardized scores of the variables were used in the regression models.					
** significant at $p < 0.05$ ; * significant at $p < 0.10$					

## SUMMARY AND CONCLUDING REMARKS

In the context of online assignments, this paper examines the impact of various factors related to “time”. Using the tracking feature of McGraw-Hill Connect to retrieve students’ starting and submission time in online assignments, the authors constructed variables for empirical analysis. The paper also investigates the effect of time spent and online behavior (e.g., procrastinators vs. non-procrastinators) on students’ performance in online assignments and overall course grade. The empirical results of the study suggest that the amount of time students spend on online assignments is irrelevant to students’ performance on the specific assignments. In the meanwhile, procrastinators who tend to start and submit online assignments late are more likely to be poor performers on the assignments.

Because of the data collection method (e.g., data were collected from a single course with the same instructor), caution should be exercised in making generalized inferences of the results of this study. Nevertheless, this study sheds light on both the field of teaching practices and research in business education. The objective measurements of time and time factors in the paper are solely based on the data retrieved from Connect. The findings indicate that the web-based learning system (McGraw Hill Connect in this research project) can be used as a monitoring instrument for instructors to identify students in need of assistance in learning process.

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# PEERS, ASPIRANTS AND COMPETITORS: DEVELOPING A SET OF COMPARISON SCHOOLS FOR AACSB ACCREDITATION REVIEWS

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## ABSTRACT

*Every school applying for initial AACSB accreditation, or for the reaffirmation of AACSB accreditation, is required to submit three comparison groups of schools that it considers peers, aspirants, and competitors (PAC). AACSB's advice for forming these groups is limited; in its Handbook for Joint Business and Accounting Continuous Improvement Reviews it states (AACSB Handbook: 7): "The applicant may select comparison groups on the basis of institutional or program comparisons and other factors such as public vs. private, size, urban or suburban location, etc." While some schools incorporate the factors suggested by the AACSB, others may use other factors as well as subjective judgments to form these groups. In this paper, we argue that regardless of the approach taken it is likely that schools do not address this task as rigorously as they should. In this regard, we point out overlooked reasons for the importance of the PAC list, and we discuss various approaches that can enable schools to be much more intentional in creating their PAC list.*

## INTRODUCTION

Business school accreditation by AACSB International has long been considered a gold standard that is coveted by high quality business schools around the world. Currently there are over 700 entities from 48 countries that claim business accreditation from the AACSB (AACSB Member List). While there are other significant business school accreditations, such as EQUIS or AMBA, AACSB accreditation is the oldest and most diverse.

In preparing for AACSB accreditation/reaccreditation, business schools are required to identify and submit to AACSB a list of a school's peer, aspirant, and competitor (PAC) schools. While seemingly innocuous, the PAC list is an important component of the accreditation/reaccreditation process and, in particular, it can play a crucial role in framing perceptions for members of the review team responsible for evaluating a school's bid for accreditation/reaccreditation.

In general, accreditation for any institution of higher education is a process governed by established standards, self-study reports, and peer review. A key to the process is peer review. A team of peer reviewers is expected to have similar challenges, operations, expectations, and programs at their schools in order to better relate to those characteristics of the school undergoing review. Without a common context, a peer review team member may have difficulty understanding and assessing the environment of the school under review.

It is in this context that the PAC list becomes an important tool for both the school seeking accreditation/reaccreditation as well as the review team charged with evaluation of the applicant school. For example, what if a peer review team (PRT) member is surprised to discover that his/her school is regarded as a "peer" school, when that PRT member clearly perceives his/her school to be an aspirant school? Subsequent judgments may be clouded and unintentional bias may occur.

Avoiding such situations can be difficult. The AACSB does not define or select peers for any school. Thus, it is the school's responsibility to inform the AACSB of schools that it considers peer institutions. What constitutes the definition of a *peer* school and how such schools should be identified are two of the issues addressed in this paper.

Each school preparing for an AACSB visit must also identify a group of *aspirant* schools. This is often a curious list. What business school wouldn't aspire to be as successful or famous as Harvard, Stanford, the London Business School or INSEAD? But is it realistic for all but the elite business schools to consider those schools as aspirant schools? While a rational person may answer "no," it might be just as rational to others to say "yes," because such schools are the ones to be emulated. In this paper, we propose a dichotomous definition of aspirant school that seeks to provide for a realistic determination of one's aspirants.

To help minimize reviewer biasedness, the AACSB recognizes that competitor schools present a conflict of interest if a review team member is assigned from such a school. So, in addition to declaring its comparable peers and aspirants, the school must define its competitor group. What constitutes a competitor school?

Finally, the AACSB also specifies minimum numbers of schools that must be identified. For peers, the minimum is six comparison schools. For aspirants, a minimum of three schools is needed, and for competitors, there is no limit. Perhaps confounding the necessary classification process is that the AACSB proscribes the possibility that the PAC list may not be mutually exclusive. Specifically, the AACSB acknowledges (AACSB Handbook: 5) that "a business school may be chosen in all three groups, as a peer, competitor, and aspirant based upon the particulars of the business school and programs offered."

In what follows, we begin with indicating the importance of the PAC list. We proceed to offer operational definitions of a peer, aspirant and competitor school, and then propose a road map for classification that involves both qualitative and quantitative methods. The paper concludes with some thoughts on the overall PAC list process.

### IMPORTANCE OF THE PAC LIST

Developing one's PAC list should be more than just a brainstorming exercise in submitting a list to the AACSB. We believe there are at least four important reasons for carefully generating the PAC list:

- 1) PRT members. Deans from the set of peer and aspirant schools form the nucleus of the PRT.
- 2) Benchmarking data. Data reports, pulled from the *Business School Questionnaire*, may be prepared for the PRT based on the set of peer and aspirant schools.
- 3) Faculty retention and recruiting. The AACSB Salary Survey can provide insight into comparable salaries from the set of peer and aspirant schools when recruiting for faculty and for benchmarking a school's existing salary levels.
- 4) Continuous improvement. In the spirit of continuous improvement, a school's PAC list should be thoroughly reviewed and revised in each five-year cycle of accreditation maintenance.

Of course, there are likely other key consequences that could be cited to indicate the importance of the PAC list. But for the purposes of this paper, we will focus on the above four reasons which we expand on in more detail below.

Perhaps the most important aspect of the PAC list is that it is often the basis for the selection of members of a school's peer review team. From the AACSB website (AACSB Handbook: 8) "Peer Review Team members. May include participants from the Comparable Peers and Aspirant Group." If team members are totally unfamiliar with the school under review, or operate under a different governance structure, or offer programs not very similar to the school under review, then an additional degree of complexity immediately transcends the subsequent visit.

A metaphor may help illustrate the situation. Some universities seek input from a campus-wide perspective on tenure and/or promotion cases involving junior faculty. There may be a university-wide committee of faculty that sits in judgment of tenure cases from all corners of the campus. Or, there may be a provost's council (or dean's council) consisting of other deans on campus that review dossiers from all the candidates. If such a group exists on your campus, and if you have had the opportunity to serve on such a group, then perhaps you have had the experience of trying to judge the tenure application from a faculty member from the arts (where performances or exhibitions are highly valued) or from someone in the social sciences (where books are the coin of the realm). In business schools, we are more likely to value peer-reviewed journal articles and may therefore have a difficult time translating our value system to a colleague from a different discipline with a different value system. A similar disconnect may happen when a peer review team member is from a school that is incongruous to the school under review.

A second use of the PAC list is the generation of statistical reports required for the AACSB review process. As stated in the AACSB Handbook (AACSB Handbook: 8):

"Statistical reports are generated from this data based on the responses from Comparison Groups identified by the business and accounting review. These reports will help form the context for judgment and consultative elements of the review."

The data used for these reports are drawn from the AACSB's *Business School Questionnaire* that each member school is expected to submit annually. If one's peer group or aspirant group is not congruent based on whatever dimensions a school deems important then the resulting reports are not likely to position the school in the best light relative to the other schools in the report. The initial impression of a school by peer review team members who study these reports may suggest a lack of high quality or high standards, especially if the school consistently trails its identified comparator schools.

A third possible use of the schools in the PAC list is for benchmarking salaries. The AACSB's *Data Direct* service allows schools that participated in the annual salary survey to create customized reports. The school is responsible for inputting a list of comparator schools from which only the salary information from those schools is compiled into a report showing the mean, median, minimum, maximum and numbers of faculty broken out by discipline and rank.

The market place for faculty talent is highly competitive. In most disciplines there are more job opportunities than there are candidates. While some candidates may seek an environment emphasizing research, others may gravitate toward a balance between teaching and research, while still others may seek a teaching-first type institution. Having a good knowledge of which schools are peer institutions, and knowing if such similar schools are also recruiting in the same disciplines can help a school identify its competition. In addition, salary distributions from peer and aspirant schools provide information that can allow a school to compete more effectively for new and replacement faculty resources.

Finally, a PAC list should never be static. Over any five-year period, significant changes may occur in the world of business schools. If your school has made significant progress on a particular set of initiatives, a (former) aspirant school may now be considered a peer. If so, this may open the door for consideration of a new aspirant school.

Conversely, a (former) peer school may no longer be considered a peer for a variety of reasons. Why were they a peer five years ago? Should they still be considered a peer? If not, why not? These are some of the questions that should be debated each five-year cycle in the spirit of continuous improvement.

Clearly, a school's PAC list can serve a number of functions apart from its necessary role in the AACSB review process.

### DEFINING PEERS, ASPIRANTS AND COMPETITORS

In this section we develop working definitions of peer, aspirant and competitor schools. We begin by defining competitors, and then move to defining peers and finally aspirants.

Part of the challenge of developing the sets of peer, aspirant and competitor schools is making sure that everyone involved is operating from a common (working) definition of the terms. A school that one person deems a peer may be deemed an aspirant by another person. What exactly is a peer school? To limit such divergent views, one needs to develop clear objective criteria while recognizing that subjective criteria may also be important.

We begin with defining a *competitor* school. In sports, it is fairly easy to identify one's competitors, such as by being in the same league or conference, or by the often spirited rivalry with a particular opponent. However, those same characteristics may or may not translate for AACSB purposes. For example, we don't often think of another school as a "rival" in the sense of an annual grudge match or game. However, ask someone who works in your admissions office about "rivals" and they might be quick to tell you about the on-going battle to attract students who are debating between enrolling in your school and another "competitor" school. As suggested, such "cross-apps" (cross applications) can serve as a good indicator of rival or competitor schools. You might be surprised what you discover about competitor schools from talking to the admissions people. This might be a good place to start when developing a list of competitor schools.

Another obvious dimension on which to define competitor schools is geography. For most schools, competitors are those schools in the immediate vicinity competing for the same students who live within driving distance of one's institution.

A third possibility, especially for schools with more of a national or international reputation, is rankings. *U.S. News & World Report*, *Business Week*, and the *Financial Times* regularly produce rankings of business schools, which can quickly reveal competitors.

The AACSB offers a definition of a competitor schools as one "where the direct competition for students, faculty, or resources is so compelling that the appearance of a conflict of interest is present." (AACSB Handbook: 7).

Based on the above, we propose the following working definition of competitor school:

*A competitor school is one for which dimensions of geography, reputation, or rankings cause your school to be in competition for students, faculty, or resources.*



We now consider a working definition of a peer school. Look up peer in a thesaurus and you find words such as “similar,” “match,” and “like.” Hence a peer school should be one *like* your school, that *matches* your profile, and with whom we are *similar*. That sounds intuitively obvious, but how do we identify these sister schools?

The AACSB defines peer schools as “schools considered similar in mission” (AACSB Handbook: 7). Mission is a qualitative attribute that must be considered as a key matching characteristic. To operationalize this attribute, one can use the AACSB’s classifications for general orientation and/or scholarly orientation as a first delineator. Other qualitative filters can then be used including the Carnegie classification (for U.S. schools), primary funding source (public/private), type of school (residential/commuter), location of school (urban/rural), student populations served, significant executive education (presence/absence), and programs offered (BBA/MBA/specialized masters/doctoral).

Quantitatively, one can look for similarities in enrollment, operating budgets, dollars spent per student, faculty size, and size of endowment. Further delineators could be faculty characteristics, such as those with doctoral degrees, or corporate experience, or those who have started a company, etc. A first step before developing the list of peer schools is to reach consensus on a set of filters or delineators.

The above considerations suggest the following definition of a peer school:

A *peer school* is one that shares similar characteristics to your school on a set of consensus dimensions, both qualitative and quantitative.

Later in the paper we discuss methods to identify and gauge the “similarity” contained in the above definition.

We now consider defining an *aspirant* school. An aspirant school is one that is perceived to be “above” or “ahead” of your school in terms of reputation, name recognition or enrollment, or that has a program or activity or process your school would like to mimic. Maybe the word “envy” is misplaced here, but clearly there is something about an aspirant school that is deemed lacking in your school.

The fact that your school may never have some of the advantages of an aspirant school is what makes the definition of an aspirant school difficult. If a school is a small, regional comprehensive school located in a rural setting then it will never have the cachet of a London Business School. A school’s geography, history, and brand may simply work against it and always will.

Therefore, while noble, wanting to emulate or aspire to the level of elite business schools is, for most schools, an unlikely outcome. That is not to say that emulating best practices is impossible. Rather, developing a brand reputation that propels a non-elite school into a higher perceived status is an appropriate goal, but challenging. In addition, positioning is not static; elite schools are going to continue to move ahead, meaning that your school is unlikely to ever “catch up.” We therefore define such schools as one’s *perpetual aspirants*. As implied, it makes little sense to include *perpetual aspirants* on your list of aspirant schools. They really aren’t aspirants. Their best practices may be adopted, but their brand may be beyond reach.

Instead, we argue for defining “attainable aspirants,” and for placing such aspirants on your aspirant group list. Attainable aspirants are schools ahead of your school but reachable. This calls for identifying dimensions one can realistically consider attainable. Such dimensions might include launching an innovative program, increasing enrollment, earning media recognition, winning student competitions, contributing significantly to economic development, or having an alumnus/alumna make national news. All are dimensions on which a school can gain visibility and that can propel it to that next *attainable* level of respect and recognition. Achieving sustained recognition over time is what will enable a school to “reach” its attainable aspirants.

Time is an important consideration here. A school should be able to reach an *attainable aspirant* school within five years (or so). With almost zero probability a school will never be able to join the ranks of its *perpetual aspirant* schools.

Given the above, we propose a two-part definition of aspirant school:

A *perpetual aspirant* school is one whose brand or market perception will almost always track ahead, but whose best practices you wish to emulate in the spirit of continuously improving your business school.

An *attainable aspirant* school is one for which your school, within five-years (or so), could attain the same accomplishments or level of name recognition.

What does it mean to *reach* an attainable aspirant school? Although answering this question might be best left to individual schools, here are some attributes for consideration. The *U.S. News* rankings of business schools include a measure of “peer ranking” for your school. If your school’s peer rank is below that of an aspirant school’s ranking, then *reaching* an aspirant school may mean attaining a similar peer ranking.

Or, an aspirant school may have achieved high visibility for one of its curricular programs or outcomes (an outstanding undergraduate major, a specialized master program, significant achievements by students on exams such as the CPA exam, etc.). Your school may be on the verge of duplicating those accomplishments with a new major, graduate program, or student activity. The ability of the marketplace (academe and/or the business community) to recognize and value your new program or achievement could form the basis for “reachability.”

In summary, we believe it is the *attainable aspirants* that should appear on a school’s list of aspirant schools.

## IDENTIFYING PEERS, ASPIRANTS AND COMPETITORS

In this section we overview both qualitative and quantitative methods that can assist in developing a school’s PAC list.

A first step we recommend is to ask one’s faculty to list 5-10 schools they deem peers, aspirants and competitors. The important part of this process is not the commonality of the schools that are listed; instead, it is getting faculty to articulate the dimensions they have used to place a school in one group or another. The importance of identifying these dimensions cannot be underemphasized, as it will form the basis for reaching consensus on subsequent qualitative and quantitative analyses designed to sharpen one’s PAC list.

A parallel step might be to use the AACSB's data base to help filter schools on various dimensions. For example, a very rough first cut would be to screen based on the categories of general orientation and scholarly orientation. Next, your school may wish to add in quantitative filters such as number of full-time faculty, operating budget, size of the student body, and qualitative factors such as public/private, education level of degrees offered, type of community (urban, suburban, rural), and so on.

The research literature documents general screening approaches usually based on a list of quantitative characteristics of schools. Fairbank & Labianca (2003) report the results of a survey of how administrators choose benchmarking institutions. Joyner, Moser & Griffin (2004: 45) describe the general process of using both qualitative and quantitative data "when making nominations for comparable, competitive, and aspirant group memberships."

More data-driven approaches are discussed in Boronico & Choksi (2012), and Simons & Reksulak (2006). Both articles approach the task of identifying PACs as data mining challenges and suggest alternative forms of clustering techniques.

At this stage, a school has the option of proceeding in several directions in further identifying schools for its PAC list. A pure qualitative approach could be employed with a modified Delphi technique by continually polling faculty on progressively shortened lists of PACs. While this may be efficient, it likely is fraught with bias and regionalism. How well do your faculty know about schools in other parts of the country or world? With AACSB-accredited schools in over 48 countries, shouldn't PAC lists begin to reflect the diversity in the organization?

Or, one can continue with more and more quantitative filters, as suggested in the literature, until you have narrowed your list to a manageable size.

Both approaches have merit, but at some point subjectivity and objectivity must be balanced. Input from faculty members who attend professional conferences or have an extensive

network of colleagues in other universities is needed to help define important accomplishments or initiatives at other schools. Input from the school dean who has attended AACSB or regional deans' conferences, or served on AACSB peer review teams, is needed to understand the changes taking place at other schools.

There is an art and a science to selecting peer, aspirant and competitor schools. The above references and recommendations provide good starting points for considering the blend of qualitative and quantitative methods one might use to assist in the development of one's PAC list. Regardless of the techniques employed, the important first step is to understand the importance and uses of one's PAC list.

## CONCLUDING REMARKS

This paper stresses the importance of the peers, aspirants and competitors (PAC) list that must be submitted to AACSB when applying for accreditation/reaccreditation. The role of the PAC list is often not well understood, and hence its importance also often not fully appreciated.

The paper identified four key reasons for the importance of the PAC list; foremost is that the PAC list is often *the* source for identifying the members of the AACSB review team.

Having argued for the importance of the PAC list, working definitions of peer, aspirant and competitor schools were proposed to fix ideas for subsequent analyses that can be used in developing a PAC list. Foremost is to engage one's faculty to uncover the dimensions they deem important for classification, and to then subsequently adapt and implement these dimensions when conducting qualitative and quantitative filters to arrive at a final grouping of schools.

As indicated, the main purpose of this paper has been to emphasize the importance of PAC list in the AACSB review process. However, as discussed in the paper, a PAC list that is developed on the basis of sound definitions and replicable data can serve many purposes apart from AACSB review.

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## STUDENT PARTICIPATION AND PERFORMANCE IN A GRADUATE ACCOUNTING THEORY CLASS

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### ABSTRACT

*This paper examines whether a student's level of participation in classroom discussions has a positive impact on the student's performance in a graduate Accounting Theory class. Prior research suggests that greater classroom participation leads to increased motivation and thought processing. This should in turn lead to development of important knowledge and skills such as increased knowledge of course content, increased communication skills, and enhanced critical thinking skills.*

*Our study contributes to the existing literature by examining the impact of class participation on specific course components, namely exams, graded presentations and research papers. By examining the effect of class participation on individual components of a course, we explore its impact on learning of course content and on the development of skills critical to success in business, namely oral communication, written communication and critical thinking. Results suggest a significant positive relationship between class participation and student performance on all assignments, and particularly on the research paper and presentation requiring critical thinking and communication skills.*

### INTRODUCTION

Students who learn how to participate in class should feel more accepted, confident, and motivated. This enhanced outlook should lead to higher performance in various arenas of a person's life. Thus, encouraging graduate accounting students to participate in classroom discussions should make them feel their input is valued leading to greater engagement with course material. Increased class participation should also lead to a more motivated group of students. Furthermore, increased participation should lead to deeper processing and higher order thinking. This enhanced motivation and thought processing should result in improved performance on multiple measures.

The purpose of this paper is to determine, after controlling for variables explaining student performance, if a student's level of participation in classroom discussions has a positive impact on the student's performance in a graduate accounting class. The study collects data on students enrolled in a graduate Accounting Theory class as part of their Master of Accountancy program at the university of study. The course is a traditional theory class involving discussions of non-empirical classic and empirical articles, the conceptual framework, and relevant recent trends in accounting theory development. The class is required during the first semester of coursework. The coursework for the semester grade primarily includes two exams (mid-term and final), an empirical research paper, and a presentation on the research paper. All exams involve essay questions rather than multiple choice questions.

The results of this study show that a significant positive relationship exists between student participation and student performance. The more students participated, the better they performed in the class. The improvement in performance from participating was especially significant for communication skills assignments, the research paper and the presentation.

Our study contributes to the existing literature by examining the impact of class participation on specific course components, namely graded presentations and research papers. By examining the effect of class participation on individual components of a course, we explore its impact on the development of skills critical to success in business, namely oral communication, written communication and critical thinking. We also examine the impact of participation on learning of course content by examining mid-term and final exam grades. Finally, this study adds to the limited body of research on class participation conducted in a business school context by examining the impact of participation on knowledge and skills in a graduate accounting curriculum.

This paper is organized as follows. We first discuss prior research. Next, we discuss the development of our hypothesis. Then, we discuss the sample and methodology of the study. Finally, we provide results from analyzing the data and offer our conclusions and suggestions for future research.

## **Prior Research**

College professors often stress the importance of class participation as a means to enhance student involvement in the learning process, especially at the graduate level. In general, the belief is that class participation will lead students to be more engaged in the classroom, more involved with course subject matter, and hence more focused on learning. Multiple studies provide evidence of this view, pointing out the benefits of class participation in making students more active in the learning process (e.g., Cohen, 1991; Lyons, 1989). Dallimore et al (2006) advocate graded class participation and cold calling as means of enhancing participation, finding increased participation frequency and comfort. Furthermore, Hertenstein (1991) asserts that student learning not only benefits from students becoming more engaged in their own learning, but also from hearing views and perspectives from other students.

Over the years, participation has been defined in multiple ways in the literature (Rocca, 2010; Petress, 2006). These have included classroom debates (Crone, 1997), participation by raising color coded cards (Heyward et al., 1996) and participating in class games and simulations (Garard et al., 1998). Most commonly however, class participation has been defined in the more traditional manner, as students participating in class discussions by asking questions or making comments about course content, cases or other material (e.g., Burchfield and Sappington, 1999; Weaver and Qi, 2005; Gilmore and Schall, 1996). These studies have generally found participation to promote more motivated and better learners. For example, Smith (1977) finds that as students participate more, they tend to engage in higher order thinking which facilitates deeper learning. Similarly, Fritschner (2000) finds that students consider class participation to be essential to their own learning. He finds that class participation increases students' thought participation which, in turn, enhances learning.

Bruns (2006, p.1) advocates class participation through case discussions as “an extremely effective way to teach accounting”. Furthermore, accounting education journals, accounting firms and multiple business schools regularly publish accounting cases suggesting wide spread adoption of this pedagogy. Yet, limited evidence exists on the effectiveness of class participation in enhancing learning and skill development in accounting classes. Lord and Melvin (1994) find that allowing both professors and peers to evaluate participation is an effective means of scoring in graduate accounting classes, but they do not test its impact on learning. Dallimore et al. (2008) find a positive association between participation in class discussion and students’ self-reported development of oral communication skills in a graduate management accounting course. Similarly, Dallimore et al. (2010) finds that greater participation and greater comfort participating has a positive impact on student learning and on their perceptions of oral communication development in a sophomore level introductory accounting class. The current study extends this work by examining the impact of participation on learning and graded skill development in a graduate accounting course.

The increased motivation and thought participation that comes from class participation should lead not only to the development of knowledge but also the development of skills critical for business majors. Desirable goals include increased knowledge of course content, increased oral communication skills, increased written communication skills, and enhanced critical thinking skills. Accordingly, not only does this study test the impact of participation on final grades, but the paper investigates whether participation impacts individual components of performance such as graded presentations and research papers that encompass communication and critical thinking skills. Further development of prior research on these specific knowledge and skill components follows.

### **Course Content: Exams as Measure of Performance**

Past research provides mixed results on whether class participation enhances students’ knowledge and understanding of course content. Garside (1996) compared learning in three classes taught by lecture format to three classes taught by in-class group discussion. While both methods resulted in significant gains from pre-test to post-test, she found no significant difference in basic knowledge development and comprehension between traditional lecture and the more participative form of classroom management.

Similarly, McCarthy and Anderson (2000) compared lecture to in-class group discussion. However, they found in-class group discussion to result in significantly greater knowledge as measured by exam scores. Reinsch and Wambsganss (1994) tested the effect of class participation on take-home essay exams for legal environment of business and commercial law classes. Average exam performance for classes that included class participation as a graded component of the class were higher than classes without graded participation for legal environment classes but not for the commercial law classes. The authors suggested this difference may be caused by differences in course content. In other words, the general, less technical, nature of the legal environment class may have allowed ill-prepared students to understand the content through class discussions. They argued this is less likely to occur in a more technical commercial law course.

Mello (2010) argued that class participation enables students with work experience to provide applications of course content to real-life workplace situations. Doing so facilitates deeper learning on the part of classmates.

Handelsman et al. (2005) studied the effects of student engagement on grades. This broader construct included class participation plus three additional factors: skills engagement (e.g., taking good notes), performance engagement and emotional engagement. When taken separately, actual in-class participation did not affect homework grades but did affect the mid-term and final exam grades. Hence, contrary to Garside (1996), Handelsman et al. provided evidence that class participation may enhance knowledge of course content.

Dallimore et al. (2010) examine the relationship between class participation and learning using final exam grade and final course grade as measures of learning in an accounting context. They find a significant direct relationship between students' comfort participating and their learning of course content as well as their self-reported oral communication development. The final course grade in this study included a final exam grade, two cases and a class participation grade. However, the effects on component parts of this grade were not separately reported.

### **Oral Communication: Presentations as Measure of Performance**

Little empirical research exists testing the relationship between class participation and development of oral communication skills. Most of the research is normative. For example, Dancer and Kamvounias (2005) reported that assessments of class participation should focus on development of oral communication skills, while Mello (2010) suggested that participation strengthens public speaking skills.

Dallimore, et al. (2008) find that self-reported frequency of participation in class discussion is positively associated with students' self-reported development of oral communication skills in the course in a graduate management accounting class. Similarly, Dallimore et al. (2010) found positive relationships between self-reported participation frequency, students' self-reported oral communication development and students' comfort participating in class. The current study examines the impact of class participation on graded oral communication skill as measured by performance on an end-of-semester presentation.

The research paper assigned in this study targeted at least two professional skills that might be influenced by participation: written communication and critical thinking. As with oral communication, almost no research has explored the relationship between class participation and written communication. Dallimore, et al. (2008) collected self-reported data on development of written communication skills and found that self-reported frequency of participation in class discussion is positively associated with student perceptions that their written communication skills grew in the course. No additional empirical studies examining class participation and written communication were noted.

Similarly, little research has empirically examined the relationship between class participation and critical thinking. Smith (1977) examined critical thinking skills and a range of classroom behaviors including class participation. He found that increased levels of participation led to a decrease in memorizing behaviors and an increase in higher level thinking like interpreting, applying, analyzing, synthesizing and evaluating. Similarly, Garside (1996) found a significant increase in higher level skills like analysis, synthesis and evaluation for group discussion over lecture. These studies suggest that class participation may lead to greater development of critical thinking as opposed to rote memorization. The current study provides an initial examination in an accounting context of whether class participation impacts performance on an assignment that requires significant critical thinking and written communication skills but does not rely heavily on course content.



## THEORY, HYPOTHESIS, AND SAMPLE

Little evidence exists on the effectiveness of class participation in enhancing learning and skill development in accounting classes. Dallimore et al. (2010) find a positive association between participation in class discussion and students' overall learning. In general, however, results on the impact of class participation on course learning are mixed (e.g., Garside, 1996; Reinsch and Wambsganss, 1994; Handelsman et al., 2005). Little research has examined the impact of participation on communication and critical thinking skills. This study will provide evidence on how participation impacts individual course components measuring performance on professional skills and overall learning in a graduate accounting class.

Encouraging graduate accounting students to participate in classroom discussions should make them feel their input is valued leading to greater engagement with course material. Increased class participation should also lead to a more motivated group of students. Furthermore, increased participation should lead to deeper processing and higher order thinking. This enhanced motivation and thought processing should lead to improved performance on multiple measures.

Thus, this study tests the following hypothesis in its alternative form:

*H1: A direct relationship exists between student participation and performance in a graduate Accounting Theory class; the more students participate in the class throughout the semester, the higher their grades for the semester.*

The sample contains students enrolled in one of the author's Graduate Accounting Theory classes from fall of 2007 to spring of 2011. Students taking this class are majors in the department's Master of Accountancy program. The class is normally taken the first semester of the program and is a traditional accounting theory class. The class is taught by the same professor every semester of the academic year once per week from 6:00pm to 9:00pm. The Theory Class is generally limited to twenty-five students each semester to make it easier to encourage participation. However, to satisfy student demands, the professor does have the authority to allow more students into the class.

Table 1 contains a breakdown of the number of student observations each semester by gender used in this study. The breakdown shows some variability among the semesters, with 55.6 percent of the total sample being male and 43.4% of the sample being female. The class sizes ranged from nine students for the spring 2008 semester to twenty-eight students for the fall 2007 semester.

For eight of the sessions each semester, the class involves discussion of articles read and presentations. During six of these sessions, the professor spends the first part of the night lecturing on materials necessary to understand the articles to read the following class. The second half of the class involves discussions of the articles (two to three per class). One student is assigned each article to lead discussion on this article. The other students are expected to participate in discussions of articles presented by asking questions or responding to questions by the professor. Every student has to submit article outlines to verify that they have read the articles scheduled that night. For the final two classes, students were required to give a ten minute presentation on their research papers. Students were expected to participate in questions and discussions of other students' presentations.

**Table 1**  
**Student Observations by Academic Year and Gender**

Academic Year	Male	Female	Totals
Fall 2007	14	14	28
Spring 2008	4	5	9
Fall 2008	11	15	26
Spring 2009	9	2	11
Fall 2009	10	9	19
Spring 2009	9	2	11
Fall 2009	10	9	19
Spring 2010	15	8	23
Summer 2010	5	8	13
Fall 2010	10	7	17
Spring 2011	12	8	20
Totals	109	87	196
(Percentages)	(55.6%)	(43.4%)	(100%)

The professor used a seating chart to make it easier to evaluate participation of each student during classroom discussions. The professor evaluated each student to determine how well he/she actively participated in the discussions at some point during the night. The professor sat in

the back of the classroom during article discussions and had the seating chart with a scoring scale to measure participation. The professor used a five point scale with three anchor points, zero being student did not participate at all, three being student participated some, and five being student participated thoroughly in the discussions. Each student had the scale under his/her name on the seating chart to make it easier to score each night's participation level. The professor dropped the lowest two participation scores of the eight class sessions to adjust for possible absences (Two absences were the maximum amount allowed for the semester; no students included in the data missed more than two absences.). The participation scores were then summed and converted to a fifty point scale for this study.

The semester percentage grade reported for each student in this study is composed primarily of two exams, a research paper, and presentation of research paper. The grade does not contain the evaluation scores for participation. The two exams are a mid-term and final exam composed of both short answer and discussion questions; thus, they do not involve multiple choice questions. Each exam was worth 100 points. The research paper involved the student developing an empirical study based on sound theory development, and was worth 100 points. The paper presentation was a ten minute presentation on the student's research paper and was worth fifty points.

## RESEARCH METHODS

Ordinary least squares regression analysis was used to test the relationship between student participation and performance in Graduate Accounting Theory. We first ran the following regression model:

$$\text{GRADE}_t = \alpha_0 + \alpha_1 \text{PART}_t + \alpha_2 \text{GENDER}_t + \alpha_3 \text{GMAT}_t + \alpha_4 \text{UND\_GPA}_t + \alpha_5 \text{UND\_DEG}_t + \varepsilon_t.$$

GRADE is the primary dependent variable in this study, measuring the overall performance of the student for the semester, calculated as the percentage grade the student earned for the semester, excluding participation scores. However, we also ran the regression model four more times using the following dependent variables representing the major components of the semester grade, two representing performance on tests and two representing performance on communication skills and research, and were measured as follows:

MIDEXAM	The points out of 100 that the student earned on the mid-term exam;
FINALEXAM	The points out of 100 the student earned on the final exam;
PAPER	The points out of 100 that the student earned on his/her research paper; and.
PRES	The points out of 50 that the student earned on his/her research paper presentation.

The independent variables of interest were measured as follows:

PART	The participation score from 0 to 50 for each student in the class;
GENDER	Dichotomous variable coded 0 if the student was male, and 1 if the student was female;
GMAT	The score the student earned on the Graduate Management Admission Council test identified when student applied for admissions to the school's Master of Accountancy program;
UND_GPA	The undergraduate grade point average of the student upon entering the school's Master of Accountancy program; and
UND_DEG	Whether or not the student had an undergraduate degree in accounting, coded 0 if the student was an undergraduate accounting major, and 1 if the student was not an undergraduate accounting major.

PART is a measure of the level of participation of the student in the Graduate Theory class and is the variable of interest in this student. A significant positive parameter estimate for PART in our models would be consistent with our hypothesis and would suggest that student participation significantly improved performance in the class, after controlling for other relevant information.

The other variables in the models are control variables. GENDER captures the impact of gender on classroom performance. GMAT and UND\_GPA capture the impact of a student's abilities upon entering the MAcc program. UND\_DEG also captures the impact of the prior knowledge of accounting studies entering our program. We expect a positive relationship between GMAT and UND\_GPA and student performance, while a directional relationship between GENDER and UND\_DEG and student performance are not as clear.

Some prior research on gender issues suggest that female students tend to outperform male students in undergraduate level classes (Mutchler et al., 1989; Lipe, 1989; Tyson, 1989), while other research finds no significant gender differences (Doran et al., 1991; Gist et al., 1996; Turner et al., 1997; Eikner and Montondon, 2001; Davidson, 2002). We are not aware of accounting research specifically addressing this issue at the graduate level.

Also, one would expect UND\_DEG to be negatively associated with student performance; someone without an undergraduate accounting degree should not do as well in a graduate theory class than someone with an undergraduate accounting degree. However, our program requires non-accounting majors to take as many as six accounting classes before he/she can take the theory class. Thus, these non-undergraduate accounting majors may have more recent accounting knowledge upon entering the theory class than undergraduate accounting majors.

As normal for regression modeling, we tested for the impact of each variable on regression results (partial F statistical tests), correlations of variables, graphic review of residuals, tests of normality of data to validate regression assumptions, impact of multicollinearity, and impact of outliers on results. These tests indicated no problems in the data significant enough to warrant dropping observations or variables from the analysis and suggest results from the regression models should be valid.

We also create t tests on certain comparisons and pair-wise comparisons using F tests form ANCOVA (Analysis of Covariates) models on partitioned data for various variables to better explain regression results. The models were ANCOVA instead of Analysis of Variance (ANOVA) models because two of the independent variables were continuous variables.

## RESULTS

Table 2 contains the means and standard deviations for the continuous variables of interest, dependent and independent variables. Since GENDER is a dichotomous variable, we partitioned the means by GENDER and calculated t values on the differences in the means for males and females to provide additional information.

The means show that, on average, the students performed at a high B average in the course (high 80 percents). The GMAT scores averaged in the upper 400s, while UND\_GPA was above 3.00. These results are generally consistent for students in a MAcc program at a large state university.

**Table 2**  
**Means and Standard Deviations for the Continuous Variables of Interest: Overall Means and Means Partitioned by GENDER**

	GENDER						2Test of Difference
	Overall		Male		Female		
1Variables	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	in Means by Gender
GRADE	0.876	0.087	0.864	90	0.0	89	0.083 -1.81
MIDEXAM		10.0	83.	11.	86.	7.877	-2.37*
FINALEXAM		8.95	86.	8.8	88.	9.054	-1.41
PRES		6.36	41.	6.3	42.	6.332	-1.09
PAPER		14.0	86.	15.	90.	12.08	-1.61
GMAT		111.	462	120	494	98.30	-1.84
UND GPA		0.43	3.2	0.4	3.4	0.397	-2.36*
PART		14.9	35.	15.	33.	14.20	0.68

<sup>1</sup> GRADE=percentage grade student earned for the semester. MIDEXAM=points (out of 100) student received on his/her midterm exam. FINALEXAM = points (out of 100) student received on his/her final exam. PRES=the points out of 50 the student received on his/her presentation. PAPER=points out of 100 the student received on his/her research paper. GMAT=the Graduate Management Admission Council total score student earned when applying for admissions to the school's Master of Accountancy program. UND\_GPA=the undergraduate grade point average of the student when accepted to the school's Master of Accountancy program. PART is the main variable of interest used in this study and is a total participation rating (from zero to 50) for each student in the class.

<sup>2</sup>t value test statistic for each variable's difference in means by GENDER.

\*\*\*Significant at p-value < .001. \*\*Significant at p-value < .01. \*Significant at p-value < .05

The female students generally performed better than the male students; however, the difference was only significant for MIDEXAM, the mid-term exam, and UND\_GPA, undergraduate grade point average. Female students had higher average undergraduate grade point averages entering the graduate program and earned significantly higher scores on the midterm exam. However, scores on other performance measures during the semester, including the final, were not significantly different.

The differences between undergraduate grade point average and performance on the midterm exam may be a measure of prior knowledge possessed by the students. This finding is consistent with undergraduate accounting studies showing that female students outperform male students. However, the significant differences in performance lessen by the end of the semester, with the overall grade not being significantly difference by gender.

To determine the impact of participation on student performance in Graduate Accounting Theory we developed multivariate linear regression models. The first model represents the independent variables PART, GENDER, GMAT, UND\_GPA, and UND\_DEG regressed on the dependent variable GRADE.

PART is the variable of interest, while the other independent variables are control variables. GRADE is the overall percentage grade the student earned in the class and represents a proxy for student performance in the class. The results for the first model are presented in Table 3.

**Table 3**  
**GRADE Regression Model: The Impact of Student Participation on Overall Performance in the Graduate Theory Class**

Variable <sup>1</sup>	Parameter Estimate	Standard Error	t Value <sup>2</sup> Statistic	P- Value <sup>3</sup>
PART	0.00163	0.00035	4.55	<0.0001
GENDER	0.02632	0.01106	2.38	0.0186
GMAT	0.00022	0.00004	4.64	<0.0001
UND_GPA	0.04609	0.01237	3.73	0.0003
UND_DEG	-0.02363	0.01532	-1.54	0.1251
Model F Value Statistic <sup>4</sup> , with 5 degrees of freedom			15.46	0.0001

<sup>1</sup>Linear Regression (REG procedure in SAS) was used to generate the following model:  $GRADE = PART + GENDER + GMAT + UND\_GPA + UND\_DEG$ . GRADE is the dependent variable used in this study, measuring the overall performance of the student for the semester, and is the percentage grade the student earned for the semester. The independent variables are PART, GENDER, GMAT, UND\_GPA, and UND+DEG. PART is the main variable of interest used in this study and is a total participation rating (from zero to 50) for each student in the class. The other independent variables are control variables. GENDER = a dichotomous indicator variable coded 0 if the student is male and 1 if the student is female. GMAT = the score the student earned on the Graduate Management Admission Council test identified when student applied for admissions to the school's Master of Accountancy program. UND\_GPA = the undergraduate grade point average of the student when accepted to the school's Master of Accountancy program. UND\_DEG = whether the student was an undergraduate accounting major, coded 0 if student was an undergraduate accounting major and 1 if student was not an undergraduate accounting major.

<sup>2</sup>This statistic is the t Value statistic for each parameter estimate. The t Value statistic, with one degree of freedom, tests the significant incremental contribution of each variable in explaining GRADE.

<sup>3</sup>P-Value of the t value statistic for each parameter estimate is the significance of each variable.

<sup>4</sup>This statistic is the Overall F Value for the Model. The F Value statistic, with five degrees of freedom, compares this model with the five parameter estimates to the intercept only model and is an overall test of the null hypothesis that all variables in the model are zero.

Table 3 results show that PART has an incrementally significant positive relationship with GRADE; the parameter estimate for PART is positive and the t Value is highly significant ( $t = 4.55$ ,  $p\text{-value} < 0.0001$ ). PART is the second most significant variable in the model. Thus, the results for PART are as hypothesized and consistent with our expectations. Apparently, greater participation in classroom discussions did lead to increased performance in the class.

As expected, GMAT ( $t = 4.64$ ,  $p\text{-value} < 0.0001$ ) and UND\_GPA ( $t = 3.73$ ,  $p\text{-value} = 0.0003$ ) are also highly significant in explaining student performance for the semester. These results are consistent with prior literature looking at student performance and add validation to our study. The results for GMAT and UND\_GPA suggest that these two measures are appropriate measures to use in predicting future performance in the first semester of course work by graduate students.

As suggested by the means in Table 2, after controlling for the other variables, a gender effect is still present in the data. The regression model results in Table 3 show that GENDER is also incrementally significant ( $t = 2.38$ ,  $p\text{-value} = 0.0186$ ), and positively associated with, GRADE. Female students performed better in the class than male students, even after controlling for GMAT scores, undergraduate GPAs, and whether the student was an undergraduate accounting major.

The parameter estimate for UND\_DEG is negative, suggesting students without an undergraduate accounting degree did not perform as well in the theory class as students with an undergraduate accounting degree. However, the results were not significant ( $t=-1.54$ ,  $p\text{-value}=0.1251$ ).

We also investigated other measures of student performance in the class. The overall percentage grade contains a number of major tasks completed by the student during the semester. Some of the tasks in the class such as the research paper and presentation also measure communication and critical thinking skills, while the class exams mostly measure knowledge. We wish to test whether participation by students in classroom discussions impacts research paper and presentation performance the same as it does exams. Prior research has focused almost exclusively on classes that were mostly technical skill classes using overall grade or exams as the measure of performance. The authors are unaware of studies looking at the impact of participation on tasks emphasizing communication and critical thinking skills.

Table 4 contains the results for independent variables regressed on MIDEXAM, FINALEXAM, PRES, and PAPER separately. Thus, four multivariate linear regression models were generated. These measures represented the major components of the grade the student received for the semester. MIDEXAM is the score the student received on the mid-term exam, while FINALEXAM is the score the student received on the final exam. The Graduate Accounting Theory class in this study only contained two exams, and the maximum possible score for each exam was 100 points. PAPER is the score the student received, out of 100 points, on his/her research paper. PRES is the score the student received for his/her presentation on the research paper topic. The score was calculated using the Rubric created by Guffey and Seefer (2006). The maximum score was 50 points.

The results for the models reported in Table 4 illustrate some interesting relationships in the data. PART is significant in explaining all of the performance measures. However, there appears to be somewhat of an accumulating effect of participation in the class.

The relationship between student participation and the mid-term exam scores was the lowest ( $t=2.29$ ,  $p\text{-value}\leq .05$ ) for the PART variable, while the strongest relationship was between student participation and the presentation ( $t=3.97$ ,  $p\text{-value}\leq .001$ ). Also, participation was also more strongly associated with the final exam ( $t=3.01$ ,  $p\text{-value}\leq .01$ ) than it was for the mid-term exam. The increasing strength of the relationship between the performance measures and student participation ( $t$  values and  $p$ -values are generally higher as the semester progressed) suggest that as the students got more accustomed to participating in the class, they performed better in the class. Various parts of the research paper were completed as the class progressed and was handed in for a final grade before the student presentation. Thus, most of the research paper was finished prior to the student's presentation on the research paper. This increasing relationship between participation and student performance pattern in this study suggests the need for future more in depth research on the possibility of participation resulting in accumulating benefits in a class.

**Table 4**  
**Regression of Independent Variables on the Major Parts (Variables) of Student Performance for the Semester**

Variable	MIDEXAM		FINALEXAM		PAPER		PRES		Statistic
	Parameter Estimate	t Value	Parameter Estimate	t Value	Parameter Estimate	t Value	Parameter Estimate	t Value	
	Estimate	Statistic	Estimate	Statistic	Estimate	Statistic	Estimate	Statistic	
PA	0.	2.29	0.1	3.0	0.1	2.	0.1	3	
GE	3.	2.16	1.7	1.3	4.2	2.	1.2	1	
G	0.	4.50	0.0	4.2	0.0	1.	0.0	2	
UN	3.	2.01	1.4	2.8	4.7	2.	2.5	2	
UN	-	-	-	-	-	-	-	-	
Model F Value Statistic				8.49***	9.22***		4.59***		
7.98***									

<sup>1</sup> Linear Regression (REG procedure in SAS) was used to generate the following models: MIDEXAM=PART+GENDER+GMAT+UND\_GPA+UND\_DEG; FINALEXAM=PART+GENDER+GMAT+UND\_GPA+UND\_DEG; PAPER=PART+GENDER+GMAT+UND\_GPA+UND\_DEG; and PRES=PART+GENDER+GMAT+UND\_GPA+UND\_DEG. MIDEXAM=the points out of 100 that the student earned on the mid-term exam. FINALEXAM = the points out of 100 that the student earned on the final exam. PRES = the points out of 50 that the student earned on his/her research paper presentation. PAPER = the points out of 100 that the student earned on his/her research paper.

<sup>2</sup> The independent variables were explained in Table 2.

\*\*\*Significant at p-value < .001. \*\*Significant at p-value < .01. \*Significant at p-value < .05.

Additional results from the regression models suggest that the female students performed significantly better on the mid-term exam and the empirical research paper than the male students ( $t=2.16$ ,  $p\text{-value}<.05$  for GENDER in the MIDEXAM model and  $t=2.06$ ,  $p\text{-value}<.05$  for GENDER in the PAPER model, respectively). Also, GMAT scores appear to be more related to technical performance in the Graduate Accounting Theory class than to communication skills performance. GMAT is highly significantly related to both exam scores ( $p\text{-value}<.001$ ), but is less significantly related to student presentation scores ( $p\text{-value}<.05$ ). GMAT is also not significantly related to performance on the research paper. Student undergraduate GPAs (UND\_GPA) is related to all of the performance measures about the same ( $p\text{-value}<.01$  or  $.05$ ), while the accounting undergraduate degree variable, UND\_DEG, is only significantly related to performance on the final exam ( $t=-1.96$ ,  $p\text{-value}<.05$ ).

To better explain the impact of student participation on performance in the class, we created a second, dichotomous, measure of student participation labelled PART2. Although you lose some information by partitioning a continuous variable, creating a dichotomous participation measure enables one to create contrasts and test for differences across the two levels of participation. We coded PART2 0 for students having a participation score of 35 or less and 1 for students having a participation score greater than 35. The cut-off point was selected based on the mean participation score reported in Table 2 of 35 (rounded from 34.777).

Table 5 contains the means for each performance measure by the two levels of participation. These results further validate the linear regression results reported earlier. Students participating the least scored lower for exams, the presentation, and the paper. The differences in performance measures are significant for all measures at  $p\text{-value}<.05$ ; however, the difference is the least significant for MIDEXAM.



**Table 5**  
**Means and Standard Deviations for the Measures of Performance (Dependent Variables) Partitioned by PART2**

PART2					
2PART2					3Test of Difference in Means by PART2
≤35			> 35		
Variables	Mean	Std. Dev.	Mean	Std. Dev.	
GRADE	0.847	0.113	0.899	0.048	-3.96***
MIDEXAM	83.008	10.693	86.653	9.153	-2.37*
FINALEXA	84.662	9.911	89.168	7.554	-3.32**
PRES	40.440	8.251	43.598	3.711	-3.27**
PAPER	85.186	19.296	91.109	6.428	-2.75**

<sup>1</sup> The dependent measures were defined in Table 2.

<sup>2</sup> PART2 is a dichotomous measure of student participation in the class, coded as 0 if the student participation score was equal to or less than 35 (out of 50), and 1 if student participation score was greater than 35.

<sup>3</sup> t Value is the test statistic for each variable's difference in means, by level of participation (PART2).

\*\*\*Significant at p-value ≤ .001. \*\*Significant at p-value ≤ .01. \*Significant at p-value ≤ .05.

## CONCLUSIONS

This paper advances research on the relationship between class participation and learning of course content. Previous research in general yielded mixed results, and previous research in accounting examined the impact of students' comfort participating rather than the impact of their actual participation. Previous accounting research also used self-reported participation data which is subject to social desirability bias. The current study shows a direct and significant relationship between actual class participation and learning of course content in an accounting context using a professor-determined measure of participation.

This study also provides an important initial examination of whether class participation significantly impacts communication and critical thinking-based assignments in an accounting context. A relationship between class participation and these assignments would indicate that the impact of class participation extends beyond learning course content, the target of most previous research. Such a relationship would also extend the researched impact of class participation on oral communication skills beyond students' perceptions as shown in Dallimore et al. (2010).

Our results show a significant positive relationship between class participation and student performance on the research paper (which includes written communication and critical thinking skills) and the presentation (which reflects oral communication skills).

The primary implication of this study is that professors should make efforts to enhance class participation in their graduate accounting classes. Doing so will not only enhance learning of course content, but may also enhance important professional skills such as critical thinking and oral and written communication skills. Enhancing participation might entail restructuring course content delivery to allow more opportunities for discussion or creating frequent class participation opportunities through special readings or other assignments. Professors may also choose to employ cold calling as a way to promote non-voluntary participation. Dallimore et al. (2010) suggests that students who are called upon non-voluntarily become more comfortable participating over time. This and other research also suggests that graded class participation may be needed suggesting that simply providing the opportunity to participate may be insufficient to promote significant participation in some classes.

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# **THE GREEHEY SCHOLARS PROGRAM AS AN INNOVATIVE SOLUTION TO THE STUDENT DEBT AND EMPLOYMENT CRISIS OF RECENT GRADUATES**

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## **ABSTRACT**

*Two looming issues for higher education today are increasing student debt and fewer jobs available for recent graduates. These issues are forcing universities to find unique differentiators to attract students. Developing innovative programs and opportunities for students to gain the skills necessary to obtain jobs upon graduation is one method to navigate higher education's competitive landscape. One example of a program that meets this challenge is the Greehey Scholars Program. This paper discusses the issues students face relating to both financial burdens and a more competitive job market and how a program like the Greehey Scholars can help universities equip students to succeed upon graduation.*

## **INTRODUCTION**

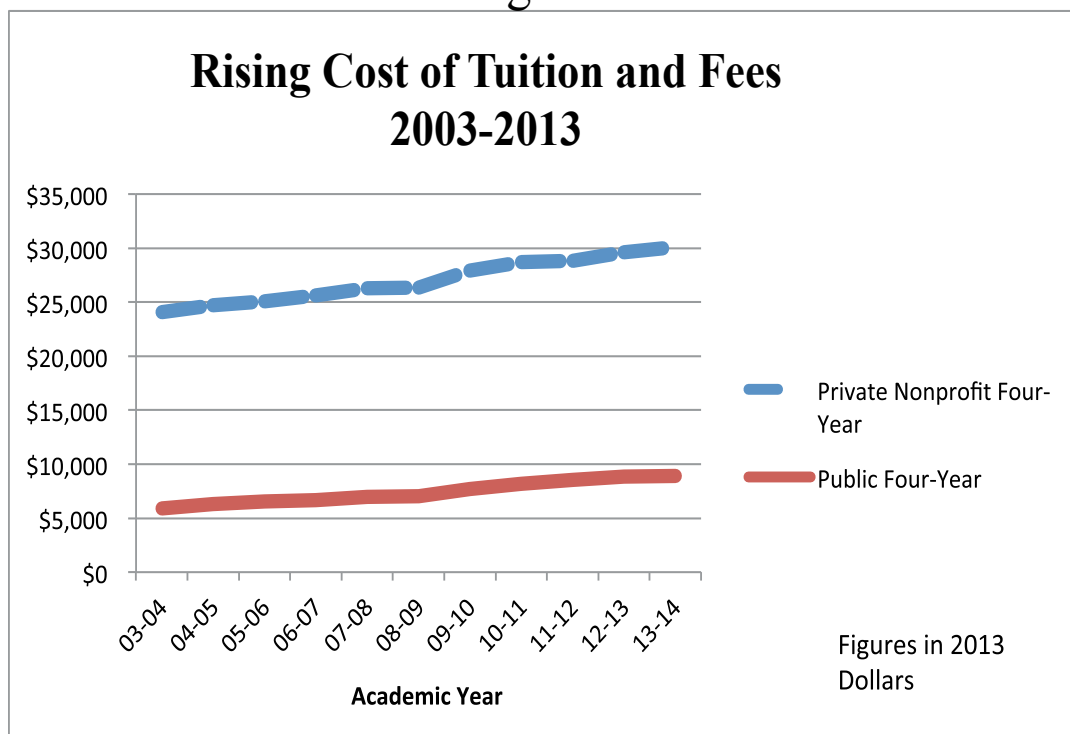
The cost of attending a public university rose 42% from 2000 to 2011 (National Center for Education, 2014). This rapid increase in costs paired with the increasingly competitive employment landscape forces universities to find unique differentiators when recruiting prospective students. Institutions, which students pay large sums of money to attend, have an obligation to prepare graduates for successful careers. Universities have no choice but to innovate, creating new programs and opportunities for students to attend college and gain the skills necessary to obtain a job upon graduation.

One such example of a program that meets both of these challenges is the Greehey Scholars Program (GSP). The GSP uses a three-pronged approach to develop students, going beyond the classroom environment and normal degree plans. In short, the GSP provides a solution to not only lower student debt but also to provide students the necessary opportunities to attain a successful career. This paper will discuss the issues that students face relating to both the financial burdens of education and challenges of career success upon graduation. Later sections provide solutions to these obstacles. The paper will outline elements of the GSP, one of these solutions, evidence of the program's success, and key features for adoption of similar models by other universities.

## CHALLENGES OF UNIVERSITY EDUCATION

In 2012, 71% of college graduates graduated with student debt, with an average of \$29,400 in outstanding debt (The Project on Student Debt, 2014). Not only are students seeing a significant increase in costs required to earn a degree, but graduates are also experiencing difficulty in paying off loans once they enter the workforce. Additionally, students must weigh the eventual financial outcomes associated with a degree. Students who strive for higher education tend to see financial benefits in the long-term, and generally, the higher the education level attained, the higher one's earnings will be. However, the more education a student receives, the more he or she will also have to borrow to fund schooling. Although the cost of obtaining a college education does not vary much across fields of study, the wages earned by professionals differs greatly depending on degree. For example, engineering majors and business majors can expect a greater financial return on their college degrees than those who study philosophy or education. Often times, students do not understand the implications of these decisions, which are often made early in the process of completing a degree, on their future quality of life (Neal, Fletcher, Shook, & Webster, 2012). Figure 1 demonstrates the rising prices of attaining an education from College Board's Trends in Higher Education (2014).

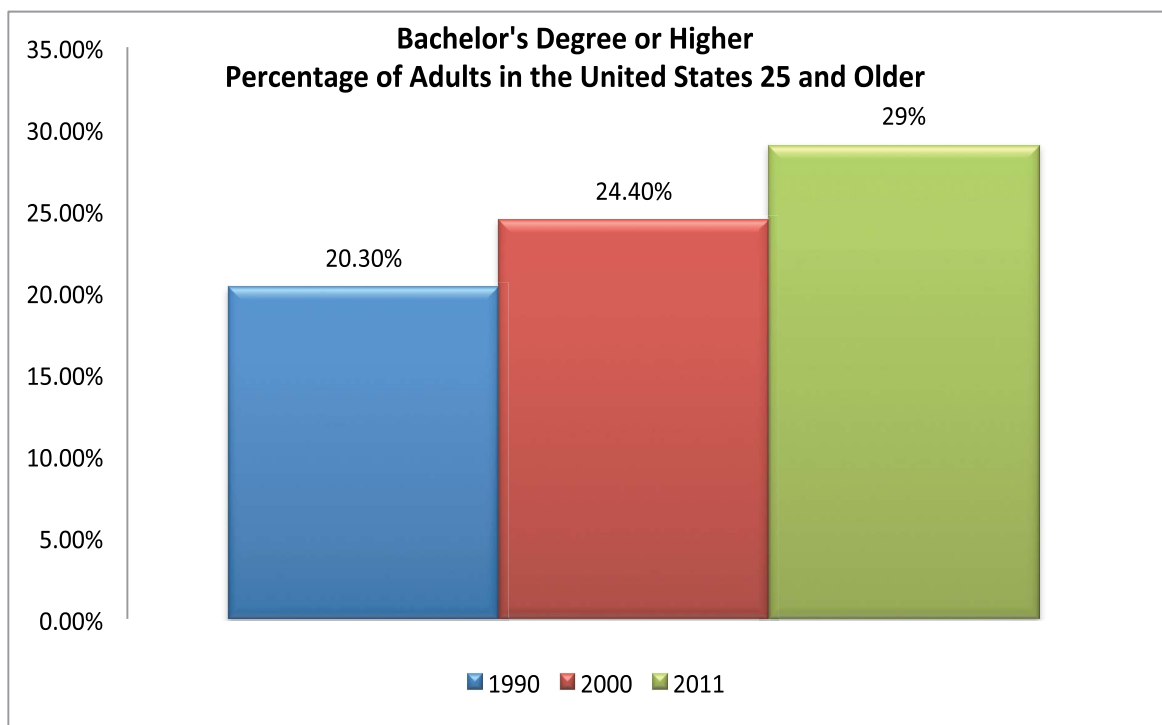
Figure 1



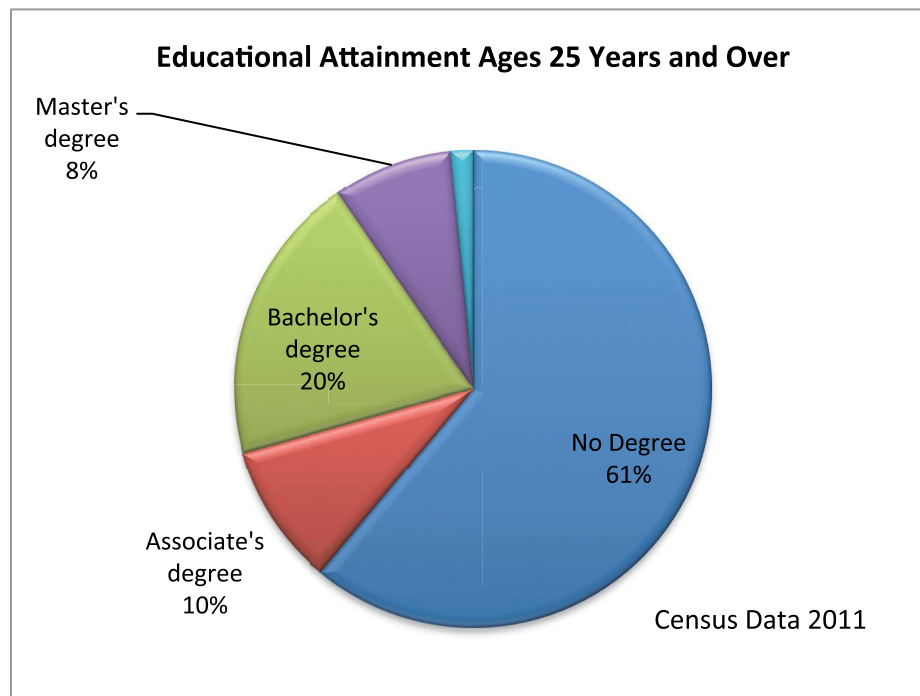
Although there are no simple solutions to student debt, universities are being forced to re-evaluate current programs and curriculum. A number of institutions have already pledged to spearhead the challenge of reducing costs through more effective financial aid packages (The Project on Student Debt, 2014). One initiative that can ease the burden of student debt focuses on graduating students “on time.” Essentially, these programs aim to help students graduate without taking an extra semester or even year to finish a degree plan. For example, a study prepared by TG Research and Analytics Services (Rice, 2013) on higher education in Texas showed that schools are designing programs to encourage on time graduation. The study included one public university, which monitors the credits earned by students receiving financial aid. If a minimum number of credits are not maintained, then the financial aid office will reduce the student’s offered aid. This program incentivizes students to take the necessary course load to graduate on time. At a private university, students work closely with advisors to ensure the correct scheduling and course work is being completed to graduate in the shortest amount of time (Neal et al., 2012). Unfortunately, these solutions only provide small relief to the overall issue of student debt. Making matters worse is the ever-increasing competition in the job market, meaning that even with a degree, many students struggle to obtain employment upon graduation.

The competition for jobs is more competitive than ever with the pool of prospective employees becoming increasingly saturated with college degrees. In 2011, 29% of adults over the age of 25 held a Bachelor’s degree or higher. This statistic, compared with 24.4% in 2000 and 20.3% in 1990, demonstrates a growing trend in Americans earning degrees in higher education. As this rate increases, employers will look for new ways to differentiate applicants, forcing prospective employees to attain higher levels of education or learn skills that are even more specialized in order to gain job placement. One way to gain these skills is to participate in coursework and special programs offered by innovative universities. Graduates without a unique set of skills will struggle to earn competitive jobs. Figures 2 and 3 demonstrate the increase in degrees obtained by American citizens.

**Figure 2**

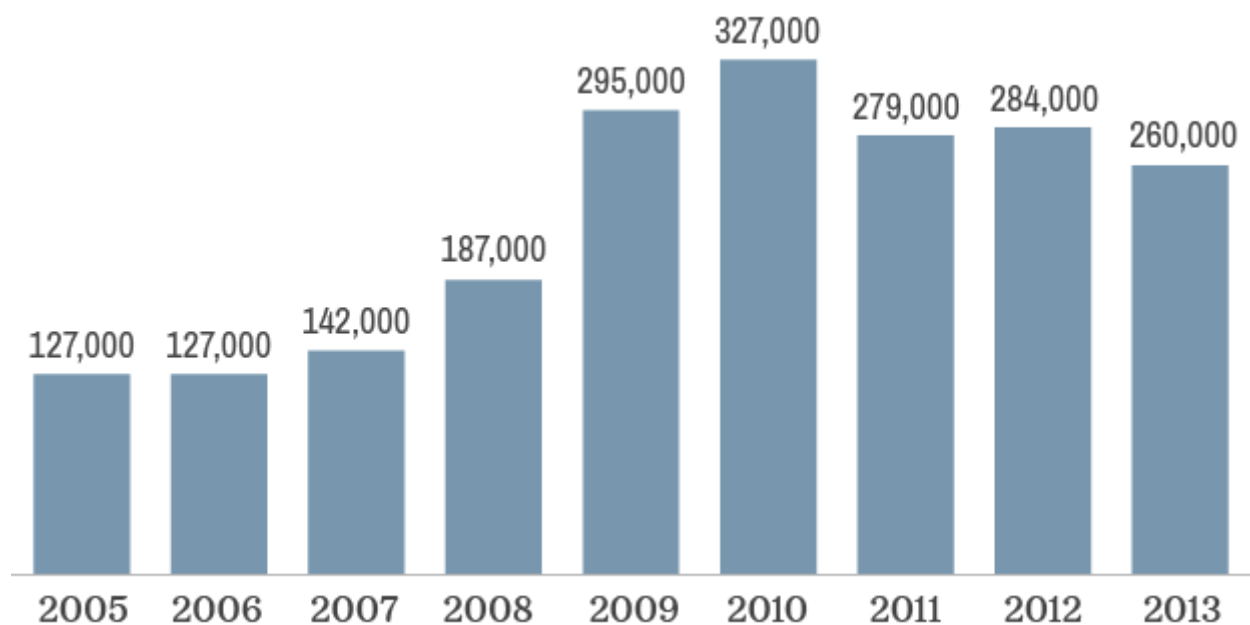




**Figure 3**

Unfortunately, the competitiveness of the job market has also been intensified by unemployment among recent college graduates. In 2013, an estimated 7% of graduates under the age of 25 did not have a job. Perhaps even worse is the concept of underemployment, or “mal-employment.” People who are “mal-employed” are working a job that does not require the degree one obtained from college. According to the Center for Labor Market Studies at Northeastern University, nearly 37% of recent graduates fall under the category of being “mal-employed” (Luhby, 2013). These graduates are not only seeing their degree go to waste, but they are also not contributing their full potential to society. These individuals are often not receiving the necessary financial return on their investment in a college education, which only creates further challenges regarding student debt. While many are underemployed, some recent graduates are barely making minimum wage. According to the Bureau of Labor Statistics, in 2013, an estimated 260,000 United States citizens with a degree were paid at or below the minimum wage of \$7.25 per hour. In 2010, this figure was as high as 327,000. To make matters worse, the largest growing type of jobs are low-wage jobs, those that pay less than \$14.00 per hour. In 2012, 58% of the jobs created were these types of jobs, forcing many college graduates to settle for jobs that do not enable financial security (Fox, 2014). Figure 4 displays the growth in college graduates with minimum wage jobs.

Figure 4



SOURCE: BUREAU OF LABOR STATISTICS

While many graduates struggle in the job market, the issue often begins before graduation. Students in school are not developing the skills needed to earn appropriate jobs after completing their education. In order to overcome this challenge, universities should focus on programs that will help students obtain skills that employers are seeking. In the National Association of Colleges and Employees' (NACE) Job Outlook 2014 survey, the top four skills desired by employers were related to soft skills. Skills such as teamwork, problem solving, communication, and organization were ranked higher than any technical or quantitative skill that employers seek when hiring new employees (Gray, 2014). As the number of citizens who earn a college degree increases, employers will begin to search for new factors in order to differentiate potential employees. Schools have a responsibility to provide students the opportunity to develop these non-technical skills in order to be placed in jobs. The traditional classroom environment focuses on technical skills and degree-related concepts, meaning students develop soft skills through involvement in extra-curricular activities, professional organizations, and internships. However, universities have the opportunity to integrate these experiences with the school's curriculum. There are multiple solutions to the issues of student debt and career success upon graduation.

## SOLUTIONS

There are multiple solutions to the issues of student debt and career success upon graduation. While some focus specifically on reducing costs, others are designed to provide opportunities for students to develop differentiable skills for better job placement. The next two subsections focus on current solutions to these problems, first from a student debt perspective and second from a skill development perspective.

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## Student Debt

One of the simplest methods to decrease student debt is to offer less expensive course work. Additionally, schools can reduce the length of degree plans. Many universities are adopting online options to provide for students. These courses and degrees can be of lower cost and easier convenience for participants. According to a study by the Babson Research Group, 6.1 million students in the United States are taking at least one online course during the fall 2010. Additionally, nearly 65% of institutions view online learning as necessary offered some type of online courses. Both of these groups have steadily increased over the past decade (Allen & Seaman, 2011). Perhaps an even growing trend is the offering of MOOCs.

MOOCs are Massive Open Online Courses. These courses provide low-cost or free classroom learning to a wide range of students over the Internet. One of the leading MOOC providers, Coursera, had over four million registered users in 2013, and universities have begun to offer college credit to students who have completed these courses (Anders, 2013). The University of Texas announced in February 2013 that it would offer nine Massive Open Online Courses, in an effort to join other elite universities like MIT and Harvard in its attempts to offer more classes to a broader base of students globally (University of Texas, 2013). Students who use these resources can significantly lower their overall cost of tuition and gain more learning than a traditional degree might offer.

Both MOOCs and “traditional” online course offerings can provide students better access to learning at an often-lower price range. However, these courses are sometimes viewed as inferior to regular, face-to-face classes. In Babson’s study (2011), only about 30% of chief academic officers feel their faculty view online courses as legitimate forms of education. Additionally, there are concerns with employer responses to online-achieved degrees. The perception of MOOCs is even lower, and while about 10% of universities are in the planning stages of offering these type of courses, many leaders in academia are unconvinced that MOOCs provide the necessary framework for course credit (Allen & Seaman, 2011). Even as students and universities eventually turn to more online course offerings, these solutions do not answer the other challenge of career readiness for graduates. In fact, one could argue that the increase in student participation online could further dilute the value of a college degree, adding to the already competitive job landscape for graduates. Solutions to prepare students for a successful degree require university funding and specific programs to engage students in learning and experiences outside of the classroom.

## Graduates’ Career Readiness and Success

Many universities have implemented solutions to improve student success in college. These programs focus on student development and often rely on experiences outside of the classroom environment. The following examples highlight successful implementations from around the United States:

Washington University in St. Louis has developed the Center of Experiential Learning, which provides innovative learning experiences for students in the Olin Business School. Students are partnered with businesses from a broad range of backgrounds, including Fortune 500s, start-ups, and non-profits to complete consulting projects. With the supervision of an advisor, students commit more than 150 hours to solve real world challenges related to operations, finance, strategy, marketing, and many other business disciplines.

Emory University has established the Emory Scholars Program, which provides full tuition to exceptional students based on academic performance and community leadership and involvement. The program provides study abroad opportunities and gives students priority for housing and registration for classes.

Southern Methodist University has partnered with community business leaders to develop the SMU BBA Mentoring Program. This program connects junior and senior-level students with mentors from the Dallas-area business community. The purpose of this program is to provide students with networking opportunities and career decision-making advice.

All three of these programs enhance learning outside the classroom and provide opportunities for students to build valuable skills that employers seek. In the case of the Center for Experiential Learning, students are given the chance to apply classroom learning to real business situations. Emory scholars have the opportunity to both research and work in other countries. Lastly, Southern Methodist University's mentoring program provides a great opportunity for students to practice their networking skills. These outside programs are effective; however, they only focus on one or two aspects of student success. The following model presented is the Greehey Scholars Program (GSP). The GSP provides a structure for which other universities can develop a program to ensure student success both during school and upon graduation. Its three-tiered approach is a significant differentiator that sets it apart from extremely specialized programs such as the ones provided before.

### **The Greehey Scholars Program**

The Greehey Scholars Program (GSP) was first introduced in 2006 on the principles of developing professional, ethical, servant leaders within a four-year track in the St. Mary's University Bill Greehey School of Business. This model aligns with the traditional four-year degree plan set forth by the university while taking advantage of time and resources beyond the classroom. The program is funded by an endowment, allowing for a yearly budget to schedule activities, projects, and travels in order to carry out the objectives of the GSP. The program guarantees the following to scholars who maintain a set of requirements:

- Full tuition scholarship including room and board
- Conferences and business visits with travel fees provided
- Funding for study abroad opportunities
- Advising for career, academic, and personal advice

These benefits help to address common challenges for students who attend college, especially from a cost of tuition standpoint. Additionally, the program aims to provide scholars an opportunity to develop the skills and network necessary to build a successful career. The GSP goes beyond simply the technical skills; instead, each theme also supports many of the soft skills, such as teamwork and leadership, sought by employers. In order to fulfil these goals, the GSP implements the three-tiered approach of learning, serving, and leading in its model for student success. While it inherently addresses the issue of student debt, perhaps the most significant factor of the GSP is its focus on preparing students for careers after graduation. Greehey Scholars participate in numerous activities and programs that support the three tiers of the program. By doing so, scholars extend their learning experiences to outside of the classroom, in the community, and in the business world.

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## Learning

Learning experiences outside of the classroom enhance curriculum within the university environment. Although the structure of higher education is necessary for students to earn a degree and master the concepts taught by professors, students can grow further once they step outside of the settings of school. Studies show that opportunities outside of the classroom lead to increased skill development, furthering a student's overall college experience (Kuh, 1995).

Universities who are looking to innovate and develop new programs for students can implement the concept of learning outside of the classroom. The GSP looks to develop a learning environment for its students outside of the traditional classroom, which is highlighted by the various activities and requirements set forth by the program.

All scholars fulfil the normal degree requirements of the university. However, the GSP enhances learning by providing opportunities outside of the classroom. These opportunities come in a variety of forms, such as national leadership conferences and case competitions. The GSP has developed a Business Interaction Program (BIP), which allows students to interact with business professionals from some of America's leading companies. Students participate in local BIPs twice a semester, visiting companies who play a significant role in San Antonio's business landscape. BIPs educate students not only on the operations, strategies, and characteristics of the specific company, but they also provide students the chance to learn more about career paths after graduation. Often times, company recruiters are present at these events, allowing students to ask questions regarding skills and experiences that companies look for in new employees. Additionally, the GSP takes one BIP trip during the school year to a city outside of San Antonio, where students can interact with multiple businesses from that region. In the past, scholars have travelled to visit businesses from cities such as New York, Atlanta, and Dallas. These trips allow students to gain exposure to different companies and experience the diverse business environments of other regions.

While BIPs provide students the opportunity to network with professionals and learn about future careers, scholars apply their business knowledge through other activities supported by the GSP. Greehey scholars have participated in consulting projects on both the local and national stage. Each project requires scholars to work together to gather data, study best practices, and develop conclusions. Upon the completion of each project, scholars present their recommendations to advisors and company executives. This process develops students' communication skills and integrates classroom learning to solve real business challenges.

A very significant feature of the GSP is its mentorship opportunities. First, scholars are provided mentoring with the program director, which gives advice on course schedules, degree plans, and career paths. Because the GSP is a four-year program, scholars develop a close relationship with the program director, allowing for personal guidance and feedback. Secondly, scholars have an excellent opportunity to become mentees through a formal mentorship program supported by the GSP. Students are given a chance to partner with leaders within the San Antonio business community to gain career advice and professional guidance. The GSP mentorship program provides significant value to scholars, who are able to network and connect with professionals that are not available within the university setting.

## Service

The second tier of the Greehey Scholars Program focuses on service learning. Not only does service learning enhance students' impact and presence in the community, but it also has shown to improve students' performance within the classroom. Service learning provides an opportunity for students to participate in experiential learning, taking advantage of learning experiences that are normally not presented within the regular classroom environment (Kuh, 1995). A survey by RAND (Gray, Heneghan, Fricker, & Geschwind, 2000) shows a significant relationship between service learning and "life skills," such as interpersonal skills and understanding diverse backgrounds. Some factors that increase the effectiveness of service learning include a strong association between course work and service experience, volunteering for more than 20 hours within an academic semester, and receiving training and supervision (Gray et al, 2000). All of these aspects are present in the service learning piece of the Greehey Scholars Program.

The GSP implements the concept of service learning by requiring scholars to participate in various methods of community service. Scholars are tasked with developing an individual service project by partnering with local organizations to support causes they are passionate about. Scholars serve a wide variety of needs within the community, volunteering at churches, youth organizations, and soup kitchens. During the 2011-2012 school years, scholars contributed nearly 900 service hours to the community of St. Mary's and San Antonio. Occasionally, students are recognized for their service to the community; however, the true reward of these projects comes in the form of the soft skills developed during the process of volunteering. Through the process of creating an individual service project, students have the opportunity to enhance these skills while forging long-term relationships with organizations and leaders within the community. In addition to individual service, scholars form teams to participate in group service projects.

Group service projects allow scholars to form teams of volunteers to contribute to the community in addition to individual service projects. These group service initiatives allow students to work together and fill specific roles needed to carry out service. One of the most significant organizations that scholars have served in is the Volunteer Income Tax Assistance (VITA) program at St. Mary's University. Each year, the St. Mary's VITA chapter helps the community claim over three million dollars in tax refunds through on-site tax preparation. Scholars team up with the St. Mary's School of Law to participate in all aspects of the volunteer process, from preparing tax returns to reviewing filing information with clients. Additionally, scholars have helped develop the curriculum for training new volunteers and help lead in classroom training for certifications. Perhaps the most significant benefit for scholars is the application of course learning to benefit the community. The VITA service project allows for real world experience in tax preparation and learning basic tax principals. However, the community environment on-site allows for development beyond tax skills. Scholars have the opportunity to build a relationship with members of the area and are able to network with professionals from some of the partner companies of St. Mary's University's VITA site. These relationships allow scholars to develop their teamwork and networking skills.



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## **Ethical Leadership**

Developing ethical business leaders is the third tier of the GSP. Ethical leadership entails leading with honor and integrity. When training the leaders of tomorrow's business world, institutions have a significant responsibility to instill the value of ethics in business. Research shows that management in companies set the tone for ethical behavior throughout the organization. Regardless of the level of leadership an employee holds, that employee has a "trickle-down" effect on the organization below him or her (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). Given the scandals of the past two decades and increased government regulations, organizations have become more concerned with ethical decision-making (Trevino, Weaver, & Reynolds, 2006). However, organizations are not the only ones who benefit from ethical behavior. In fact, research shows a strong correlation between honesty and humility, both characteristics of an ethical individual, and job performance (Johnson, Rowatt, & Petrini, 2011). More importantly, employee job satisfaction is enhanced as a result of a strong ethical environment within an organization (Neubert, Carlson, Kacmar, Roberts, & Chonko, 2009). In short, an ethical individual is not only more likely help his or her organization, but he or she is also more likely to have a more fulfilling job experience. While the benefits of ethical behavior are seen in the business world, the concepts must be taught at a lower level in the university environment.

Training ethical leaders is one differentiator for the GSP. As of 2009, only 25% of AACSB accredited business schools had a course specifically focused on ethics (Mayer et al., 2009). Therefore, those schools that emphasize ethics have a potential advantage when engaging recruiters. Graduates at these universities benefit from being exposed to the significance of ethics in business. In the St. Mary's Bill Greehey School of Business, students take courses ethics. However, the GSP further supports the importance of learning ethics beyond the classroom. In the GSP, scholars are encouraged to practice their leadership skills in campus organizations and in the community. Students in the GSP are known for taking on leadership roles across campus and even starting their own organizations. Some scholars have held positions in organizations within the business school, such as the student-managed business or accounting club, while others have become involved in campus-wide organizations such as Christian groups or Greek organizations. Scholars are expected to lead with dignity and produce successful results as leaders. Scholars are then evaluated on their performance through feedback from the GSP advisor and faculty advisors of scholar-led organizations. These leadership experiences help supplement the ethical learning that occurs in the classroom, resulting in scholars who have a strong set of ethics to carry into their careers.

## **Impact of the Greehey Scholars Program**

The GSP is comprised of high performing students, who earn recognition for work both inside the classroom and in the community through outstanding student and leadership awards. However, the true mark of the program's success comes in the form of results after graduation. 75% of scholars are either placed with a job or admitted into graduate school upon graduation. Three months after graduation, scholars have an 85% job placement rate. While many scholars begin their careers within the San Antonio community, others venture out to other regions of the

nation and world. Scholars have found full-time employment within areas of the United States such as Seattle and Dallas. Other graduates gain employment internationally in countries like South Korea, the United Kingdom, and Honduras. Still others have pursued graduate and post-graduate programs in cities such as Indiana and Alabama.

One of the key factors influencing scholars' success is the real world experience they gain during college. According to the NACE Job Outlook Survey 2014, 75% of employers said they look for recent graduates with relevant experience when making hiring decisions. Relevant experience often requires students to go outside of the classroom. Greehey Scholars gain this experience through GSP supported initiatives such as consulting projects and case competitions. Over the past two years, scholars have teamed up to present at the TCU Values and Ventures competition. This competition requires students to develop for-profit ventures with values-centered goals. During the 2012-2013 school year, scholars developed recommendations for a Fortune 500 company to improve its diversity in recruiting. These activities help scholars gain relevant technical skills employers look for. Additionally, scholars are encouraged to complete internships before graduation both during the semester and summer breaks. Scholars leverage their networking experiences and connections made during BIPs and mentorship activities to earn internships.

Internships are one of the most effective ways for students to differentiate themselves when applying for jobs. Although most universities have career services centers, there needs to be more of a focus on encouraging students to participate in internships while in college. Studies show that internships improve employment marketability for graduates seeking full time jobs. Furthermore, the internship experience can enhance students' interpersonal skills and understanding of the requirements of a normal job (Clark, 2003). Internships allow students to gain technical skills that are often not taught in the classroom. For example, an accounting intern may gain experience using software such as QuickBooks, while a marketing intern may take charge of a company's social media campaign. Furthermore, while some classes may expose students to the basics of programs such as Microsoft Access and Excel, students have an opportunity to develop the expertise needed for future jobs while working as an intern. Over the past few years, Greehey Scholars have earned opportunities to intern with many organizations ranging from small business to Fortune 500 companies.

## **The GSP Model**

Given its initiatives and results, the GSP provides a model for other universities to implement when looking for innovative methods to improve student development. When looking to implement this model, other institutions should focus on the following components:

- Provide a merit-based scholarship to cover some portion of student expenses
- Provide funding for students to participate in conferences and competitions throughout the nation
- Develop a holistic approach for students to extend learning beyond the classroom
- Create programs to advance technical skills and enhance professional development



This model can be developed in coordination with some other solutions currently available. Supplementing a program like the GSP with online education or MOOCs could help lower the amount of funding needed from a university perspective and still provide inexpensive education for students admitted into the program. Lastly, universities can develop this model to fit their own needs and goals. For example, this model could be crafted specifically for certain degree plans, with programs focused on developing soft and technical skills needed for those professions. Overall, the model is only one possible solution to the challenges of both student debt and success upon graduation.

## CONCLUSION

With the growing student debt crisis and increasingly competitive job market, students are searching for methods to succeed from both a financial perspective and a career standpoint. Institutions, who ultimately serve the students, have an obligation to provide solutions for students to overcome these challenges. While some universities focus to reduce expenses for students, others spend resources on programs to increase student learning experiences. However, there is a need for universities to do both, which requires innovation.

A program such as the Greehey Scholars Program provides a model for other universities to adopt. The program offers a merit-based scholarship, which effectively eliminates debt for admitted students. More importantly, the GSP provides plenty of opportunities for scholars to develop skills necessary to succeed in their respective careers. These experiences go beyond the classroom and allow students to excel outside of academics. The GSP's three-tiered structure, based on learning, serving, and leading allows for students to gain exposure to a broad set of environments in which they can advance their business knowledge and expertise. The successes of Greehey scholar graduates demonstrate the effectiveness of this innovative model. In short, learning institutions must take an innovative, holistic approach to provide solutions for graduates to overcome student debt and achieve success in the competitive job market.

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