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ENHANCING MANAGEMENT EDUCATION RELEVANCE: JOINT CREATION OF KNOWLEDGE BETWEEN BUSINESS SCHOOLS AND BUSINESS

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ABSTRACT

Management education has been criticized for its limited contribution to both students and business. Yet, the traditional education approach has not undergone fundamental changes in decades. A number of new educational models have been proposed, but challenges seem insurmountable when it comes to implementation. This article explores how an effective change in management education could be made through joint creation of management knowledge between business schools and the business community. We argue that this collaboration in knowledge creation complements the new management education models and is helpful to their implementation.

JEL: I20, I21, M10

KEYWORDS: Management Education; Business Relevance; Joint Creation of Management Knowledge

INTRODUCTION

Management education has been criticized for its irrelevance to the real world practice and limited contribution to students' career success. The wave of criticism was triggered by business failures such as the loss of U.S. dominance in the world car market three decades ago. Hayes and Abernathy (1980) contended that American managers have led the way to economic decline because of their analytical detachment and focus on short-term cost reductions. These inferior managers were often educated by business schools, so Leonard (1984: 47) argued that "the disastrous American emphasis on short-term, bottom-line management owes less to science classes at Central High than to MBA classes at Harvard."

More recently, scholars and practitioners have intensified their criticisms. They complained that graduates can use very little of what they were taught in school (Detrick, 2002); business schools foster specialists, not managers (Mintzberg & Gosling, 2002); consulting firms can reproduce a two-year business school experience in three weeks (Preffer and Fong, 2002); and employers hire MBA students because they are "a prescreened pool," not because they believe that the education delivered in the classroom creates value (Leonhardt, 2000). Therefore, business schools appear to have been "on the wrong track" and lost their way (Bennis & O'Toole, 2005). They are less successful than the burgeoning number of MBA graduates might indicate (Preffer & Fong, 2002), and their "golden days" seem to be over (Bridgman, 2007).

Facing the widespread criticisms of management education, scholars have proposed a number of new educational approaches and models. Some of them are incremental, focusing on improvements in curricula and/or teaching methods, such as requiring a business ethics course in the undergraduate core curriculum (Rutherford et al., 2012), team teaching (Greiner et al., 2003), using executives as professors (Clinebell & Clinebell, 2008), learning-on-demand (Armstrong & Sadler-Smith, 2008), and design thinking (Dunne & Martin, 2006). Other educational proposals are more radical. According to Grey (2004), incremental solutions are not sufficient for addressing the problems business schools face. The problems in management education should be tackled with changes in pedagogy rather than changes in curricula (Campbell et al., 2006). A less-than-relevant curriculum may be a main culprit, but "the

curriculum is the effect, not the cause, of what ails the modern business school (Bennis & O'Toole, 2005: 98). Thus, some more radical approaches are proposed, including the student-as-partner model (Ferris, 2002), the student-as-client model (Armstrong, 2003), the professional model treating management as a profession (Bennis & O'Toole, 2005; Khurana & Nohria, 2008) and critical management education (Bridgman, 2007; Dehler et al., 2001; Grey, 2004).

Despite all these responses from management educators, the traditional educational approach has not undergone any fundamental change (Welsh & Dehler, 2007). Countless calls for changes have been made, but the "pleas seem to fall on deaf ears" (Bell, 2009). According to Pfeffer and Fong (2002), a profound change in contemporary management education will be limited in the U.S. in the foreseeable future because of institutionalized practices. The most prestigious business schools have little incentive to change the rules of the game that put them on top. Because they are able to attract the best students, who are sought-after job candidates that are offered the highest salaries, these schools are insulated to some degree from external adverse influences. But what about less prestigious schools? They are facing more serious challenges in today's competitive education arena. They need a fundamental change more than the elite group does.

This article explores how we can make a change in management education so that it becomes more relevant to business and more helpful to students' career success. We acknowledge the value of the new proposals, but we also argue that each proposal, if used alone, may not be sufficient to address the problems plaguing business schools. We further argue that in order to make effective fundamental changes to the curricula and pedagogy, business schools and businesses need to go beyond current collaborations.

The remainder of the paper is organized as follows. First, we conduct a literature review of management education in the U.S. and discuss challenges the traditional business schools face. Second, we analyze the new educational models aimed at solving the problems in management education. Third, we propose the next critical step in management education: the joint creation of management knowledge by business schools and the business community. We conclude that the collaboration in knowledge creation is a starting point for addressing the challenges facing business schools and a necessary condition for successfully implementing the new educational models. Therefore, it warrants further attention and development efforts.

LITERATURE REVIEW

With a gift of $100,000 made by Joseph Wharton in 1881, the University of Pennsylvania established the first business school in the United States. In 1900, the first MBA program was started at Dartmouth College's Tuck School of Business. There were approximately 150 business schools at that time (Friga et al., 2003) and more have been established since then. Student enrollment in business schools increased dramatically after World War II. By 1955, business had become one of the most popular undergraduate majors (Cheit, 1985).

Friga and colleagues (2003) divided the history of MBA education in business schools into several eras. The earliest era was corporate-based and emphasized business relevance. Most business professors were corporate managers. They brought their business experience into the classroom and contributed to the design of the MBA program. The faculty-based era began in the 1950s. This era was marked by an increasing focus on research and academic rigor, so business schools became less vocational. The swing of pendulum from business relevance to academic rigor also applied to undergraduate programs as they were evolving.

Ironically, when business schools focused on practice in early times (corporate-based era), they were criticized as being too vocational. After they shifted focus from practical usefulness to academic legitimation (faculty-based era), they were criticized as being too academic, distant from business practice, and not producing effective managers needed by business. Friga et al. suggested that business educators should not return to the corporate-era as they strive to tackle the relevance issue. Instead, they proposed that business educators move into a "student-based" era in which business schools emphasize "delivering the most important content in the most efficient manner and at the lowest cost" (2003: 236).

Management education is now becoming more competitive than ever before. First, for-profit organizations like the University of Phoenix and Kaplan University have made significant inroads into the academic arena (Friga et al., 2003). They offer associate's, bachelor's, master's, and doctoral degrees, just as traditional business schools do. Second, corporate universities have grown exponentially. They were first started at Disney, McDonalds and Motorola more than three decades ago to train their own employees. The number of corporate universities has now surpassed 4200 on a global basis (Meister, 2006). Many of them train not only their own employees, but also those from other companies (Stuart, 1999). Third, consulting firms are challenging traditional management education by performing both internal and external management training services (Moore, 1997).

It is clear that traditional business schools are not the only institutions that offer management education. In order to survive and excel, they need to pay attention to the competitive environment (Pfeffer & Fong, 2002). Since non-traditional education providers are now competing for students who seek management knowledge and skills, students will inevitably compare their offerings with traditional academic programs, whether business schools like it or not (Armstrong & Sadler-Smith, 2008). As academic institutions, business schools "can no longer make uncontested claims to knowledge supremacy" (Starkey & Tempest, 2005: 71). If they cannot provide management education that both students and business value, they are unlikely to survive in the long-run (Grey, 2002).

Who Is to Blame?

Behind the criticisms of management education are some well-established educational practices in most business schools. First, program design is function-oriented. Russell Ackoff, a pioneer in management science and systems thinking, noted that business reality cannot be divided into separate disciplines. As he stated in the inaugural issue of *Academy of Management Learning and Education*, "There is no such thing as a marketing problem or a financial problem or a production problem. These are points of view, not kinds of problems" (Detrick, 2002: 60). Greiner et al. (2003) contended that the shift away from interdisciplinary thinking in business education has led to students' insufficient preparation to become strategic leaders.

Second, management education has been overemphasizing analysis, treating management as science. This analytical approach has led to problems such as "knowing-doing gap" (Greiner et al., 2003) and the inability to address issues that are ambiguous and context-based (Bailey & Ford, 1996). The art part of management has been downplayed to the detriment of business students. According to Adler (2006), artistic skills are becoming more attractive in the 21st century because of the importance of creativity and innovation. Pink (2004) predicted that the traditional MBA students will become this century's blue-collar workers, performing analysis and crunching numbers because these skills are easily learned and imitated. In contrast, he anticipated that an arts degree will become "the hottest credential in the world of business" (p.21).

Third, many business courses use economic and financial indicators to measure success. The overemphasis of economic success and under-emphasis of values and ethics have contributed to unethical behaviors of business school students. Studies show that students in business schools are more likely to

cheat in classes than those in other schools, such as law, medicine, and science; are more likely to help fellow students cheat in exams; and are less likely to report cheating to authorities (Pfeffer & Fong, 2004). Students' academic dishonesty is carried through to their professional conduct in the business world. According to Starkey and Tempest (2005: 65), "the business school has championed an approach to business that has led to the management practices that characterize the dysfunctional aspects of contemporary capitalism."

It is indisputable that business schools are responsible for the education they deliver. According to Trank and Rynes (2003), however, business schools may seem, to some degree, to be a "passive victim" in de-professionalization because management education is also influenced by factors beyond their control. Other parties, including business, students, and media rankings, have also played a role in "moving our cheese." For example, businesses often prefer graduates with immediate skills necessary for the first job and emphasize specialized knowledge over social and ethical behaviors (Rynes et al., 2003). Thus, students want specialized training and show little interests in theory and behavioral topics. Business schools, which increasingly depend on students and businesses for revenues, have to satisfy this immediate interest. Media rankings have pushed business schools further in their short-term orientations: students and employers are deemed to be business schools' two customers. "Let the customer speak" is the philosophy behind *BusinessWeek*'s ranking of business schools (Reingold, 1998).

The viewpoint of student-as-customer may seem reasonable because students pay for the services provided. Without students, educational institutions would not exist. But, as Porter et al. (1997) argued, this viewpoint is seriously flawed. In the business world, customers are assumed to be "king" and "always right". Students are not always right when it comes to business education (Rubin & Dierdorff, 2009). They often know their "symptoms" or "wants," but may not know their "underlying needs" (Armstrong, 2003). For example, managing people is a fundamental task for managers. Based on a 1997 study commissioned by AACSB, however, MBA students ranked human resource management as least important in the business school curriculum (Educational Benchmarking Institute [EBI], 1997). If students are treated as customers, it is difficult for business schools to dissatisfy them in order to correct them. The result will be a compromising of academic standards.

Though businesses are an indirect "customer", they have a significant, if not greater, impact on students' behaviors because they employ students during and after graduation. If businesses prefer students with immediate specialized skills such as sales, technology management, or financial engineering (Trank & Rynes, 2003), then students will be less likely to take other courses that businesses do not seem to value. Business schools may mandate education in areas like soft skills or ethics, but what if students are not motivated? Motivation is a necessary condition for effective learning (Baldwin et al., 2011). If students have little interest in certain courses, they may be tempted to cheat in order to get a good grade. As we discussed earlier, business students are more likely to cheat than those in other schools.

A number of solutions have been proposed to address the problems in management education. Some focus on incremental improvements of programs, curricula or teaching methods, which are relatively easy to implement. Others are related to the pedagogy itself, so they are more radical. Given the purpose of this study, we discuss four radical proposals that represent a departure from the traditional management education: student-as-partner, student-as-client, the professional model, and critical management education.

NEW MANAGEMENT EDUCATION MODELS

Student-as-Partner Model

Franz (1998) argued that "whatever you do, don't treat your students like customers!" He claimed that faculty would be tempted to entertain students, please them, and make them happy if students were customers. Moreover, rule-bending and grade inflation would be expected. If students are not customers, who should they are? Ferris (2002) suggested students are junior partners, while professors are senior partners. Central to this student-as-partner model is the collaborative relationship between students and professors. An important function of professors as senior partners is mentoring. They need to work hard to ensure the quality of the products of this relationship, including papers, presentations, and tests, so that both parties will win. According to Ferris, the student-professor partnership represents an "ideal model" stemming from "the real," which can help both students and educators grow.

Student-as-Client Model

According to Armstrong (2003), the student-professor partnership model is useful for doctoral teaching, but may not apply to undergraduate and MBA programs because of three factors: large class sizes, relatively low students' educational maturity, and limited student-faculty interactions. He proposed a student-as-client model, which might work better for undergraduate and MBA students. Students have unmet needs in intellectual development and employability, so they, as clients, seek help from professionals (namely, faculty). Faculty members are able to provide directions or corrections to students. Students then should follow faculty's advice in order to benefit from the service. They need to know that "certain issues are matters of professional judgment that they may not immediately appreciate" (p. 374).

The student-as-client model has its appeal. It puts faculty in a more active role in which they can say no if students are wrong. However, the model assumes that faculty members have "all the knowledge and expertise, and the only challenge is to get that knowledge and expertise to the student-client in a satisfactory way" (Ferris, 2003: 375). This is not true in today's business environment characterized by complexity and uncertainty. As Ferris argued, faculty also needs to learn and grow. Treating students as partners would reflect the reality better than treating students as clients.

The Professional Model

Management education has also been criticized for failing to shape students' ethical behaviors (Starkey et al., 2004). Corporate scandals, such as the recently discovered manipulation of LIBOR by some of the world's largest banks, provide support for this argument. As a result, scholars have suggested that management be treated as a profession, and business schools model themselves after other professional schools (Bennis & O'Toole, 2005; Khurana & Nohria, 2008). For example, professions such as medicine and law have codes of conduct, so business schools could teach the meaning and consequences of business codes. These codes would remind managers of their obligations, help curb misconduct, and benefit the whole society (Khurana & Nohria, 2008).

The professional model may help shape managers' professional behaviors, but business schools can hardly enforce any professional standards because management is not a profession in the classic sense (Mintzberg, 2004; Pfeffer & Fong, 2004). For a profession such as engineering or medicine, knowledge can be codified and its effectiveness can be certified. For business management, people have neither reliably codified much of its practice nor certified its effectiveness. In terms of educational background, an engineer, physician, or lawyer would not be trusted without formal training; in contrast, managers who have never entered a management classroom are often trusted because they do not need a management degree to run a business successfully (Grey, 2002).

Critical Management Education (CME)

CME has been advocated by many European scholars and is practiced in Europe (e.g., Dehler et al., 2001; Grey, 2004; Learmonth, 2007). A critical approach to management education draws upon students' experience, work or non-work-related, and problematizes rather than simply validates management theories, assumptions, and taken-for-granted models. Grey (2004) argued that CME may help reinvent business schools by emphasizing two elements: values and context. He contended that management is never neutral and is always value laden. Therefore, business schools should not treat values as a topic reserved for courses (or modules within courses) that focus on business ethics or corporate social responsibility. Instead, he proposed that business programs integrate the concept of values into discussions and analyses across the curriculum because values are an integral part of all managing. Dehler et al. (2001) suggested that management education overcome its longstanding simplification agenda because business management displays irrational complexity that defies abstractions. CME can equip students with an understanding of the complex historical, social, political, and philosophical traditions that underlie the contemporary perspective of management.

Reynolds (1999) pointed out that CME's solution to the problems facing management education is not without its pitfalls. CME may generate disruptive consequences in terms of adverse psychological or social impact. Learners, who are required to continually question conventional assumptions, established structures, and common practices, risk "cultural suicide" by inadvertently excluding themselves "from the cultures that have defined and sustained them up to that point in their lives" (Brookfield, 1994: 208). Practitioners, who are being consistently questioned and challenged, may feel powerless or alienated (Reynolds, 1999). But the counter argument is that a departure from the norm is often necessary when the environment is changing. Concepts such as "disruptive technology" and "radical innovation" reflect this need.

Discussion

All the above proposed solutions to the problems of management education have their merits. Both the student-as-partner model and the student-as-client model reject the notion of students as customers, a notion that has generated more problems than benefits. Working with partners or clients help professors avoid becoming "passive victims" who hesitate to say no to students. Instead, these perspectives encourage them to uphold high academic standards, which, in turn, should have positive impacts on students' professional behaviors after they become managers in the business world. There is a dilemma when business schools implement these two models: if businesses take a short-term view, for example, preferring immediate technical skills when hiring new graduates, then we expect students will respond with short-term pursuits. How should business schools respond?

The idea of management as a profession is not new. It originated a century ago (Khurana & Nohria, 2008). However, it has been difficult to model business schools after other professional schools, such as medicine and law. First, the correlation between academic degrees and business success is often weak. This is a relevance issue, which has been criticized recently. Second, people can run business without a business degree. This situation is very different from those faced by medical and legal professionals. Third, there are no universal theories or frameworks that address problems in the business world. Predictability is low and solutions tend to be context specific. Fourth, although professional codes can help improve ethical behaviors, which are particularly important in business, their role is limited. A main reason is that, except for the field of accounting, they do not have binding forces and are not as enforceable as those in law and medicine.

CME seems to have important implications for solving problems facing management education. By taking values into account, which is one component of CME, students can explore the rationale and

consequences of a wide range of managerial actions (Grey, 2004). When a broader context is used in teaching, which is another component of CME, students can grapple with the complexity of business environment and the contextual nature of business. CME helps bring students to the reality of business management, thus contributing to the issue of business relevance. Despite its merits, CME is not likely to help change what is taught in the core curriculum in American business schools. According to Zald (2002: 366), it is "a largely marginal enterprise, tolerated (sometimes barely) but not taken seriously, especially in the elite schools."

It is not easy to put these new models into practice. Effective management education is too complex to address on a basis of a single theoretical framework. More importantly, successful implementation of these new models requires joint efforts from business schools and the business community. First, business has the final say as to whether management education is effective. If business school graduates cannot help improve the overall well-being of business, management education fails. Second, business has huge impact on educational practices. As far as recent criticisms are concerned, business is a culprit in "moving our cheese" (Trank and Rynes, 2003). Third, students' behaviors are not only affected by education, but also by business because it is the source of job opportunities.

Partnerships between business schools and business are not new, but they are largely on the personal and local levels (AACSB International, 2006). We propose that business schools partner with the business community to create management knowledge. Our call for action is not a simple collaboration on certain projects between business schools and businesses; it is far more foundational and shifts the role of business in management education. Traditionally, business has been viewed as a "customer," though indirect, and the relationship between business schools and business has been hierarchical (Elliott & Reynolds, 2002). Academics are supposed to create and disseminate knowledge, while practitioners are expected to apply knowledge. Their collaboration does not go beyond this hierarchical relationship. A knowledge-creation partnership puts the collaboration in a context of non-hierarchical relationship in which knowledge is created jointly by business schools and the business community. In the following section, we discuss the joint creation of management knowledge in detail. We also explain how this collaboration can complement the new educational models and facilitate their implementation.

A NEW PATH FORWARD: JOINT CREATION OF MANAGEMENT KNOWLEDGE

According to Augier and March (2007), professional schools experience tensions between experiential knowledge and academic knowledge. The former is derived from practical experience, while the latter results from scholarship. While these two types of knowledge should be integrated into a balanced perspective, they often are perceived as dichotomous. Historically, the emphasis has been shifted from one type of knowledge to the other. Recent critiques of business schools are their focus on academic knowledge at the expense of business relevance. Why is it difficult to balance and integrate the two types of knowledge? There can be many explanations to this separation and the influencing factors vary. We argue that two influencing factors are fundamental: misunderstandings between academics and practitioners (AACSB International, 2006) and their hierarchical relationship (Elliott & Reynolds, 2002). These two factors are related and help explain why management education has evolved to the point we have today.

AACSB International (2006) reported that misunderstandings exist between business schools and the business community. On the business side, executives still view business schools as the "ivory towers" whose pace is different from that of business. Teaching and research are thought to be too academic, isolated from real-world practice and day-to-day operations, and slow to respond to new business challenges. On the business schools' side, deans and faculty believe the business community misunderstands the importance of academic rigor and their missions of teaching and research. They are frustrated by the short-term pursuit in the business world and also disappointed by the difference between

what business executives say and what they do (Rynes et al., 2003). Compared with other professional schools such as law, medicine, and engineering, business schools "are relatively unique …… in the degree of separation from the profession that they supposedly serve" (Pfeffer & Fong, 2002: 89). If the academic and business worlds remain separated, it is hard, if not impossible, to resolve the relevance issue of management education.

The misunderstandings between academics and practitioners result to a large degree from their hierarchical relationship. The unilateral transfer of knowledge has generated questions about the value of the knowledge created by academics. Based on a study of business ideas, Davenport and colleagues (2003) concluded that most business schools have not been effective in creating useful business ideas. Therefore, it is necessary to make the academic-practitioner relationship less hierarchical (Elliott & Reynolds, 2002; Reynolds & Vince, 2004). "Truth is not to be found inside the head of an individual person; it is born between people collectively searching for truth, in the process of their dialogical interaction" (Bakhtin, 1984).

Based on this perspective, we strongly advocate that both academics and practitioners make contributions in terms of ideas and experience to the development of management knowledge (Reynolds & Vince, 2004). This argument is particularly important in today's business environment in which business conditions and effective business practices are ever-changing. The joint creation of management knowledge is not about collaboration between certain business schools and business firms. It needs commitment and effort made by the two communities.

Collaboration between Business Schools and Business

Collaboration between business schools and business has long existed. As early as 1881 when The Wharton School, the first collegiate business school in the United States, was established, practitioners were invited to teach undergraduate business courses (Cheit, 1985). When MBA programs were introduced into business schools, professors were largely practicing or retired managers who shared business experience (Friga et al., 2003). The early collaboration between business schools and business was focused on practical implications of management education. It was this type of collaboration that attracted criticisms of insufficient rigor in terms of the knowledge and skills that students gained, which led business schools to pursue academic legitimation.

Collaboration between the two communities has gained favor in recent years. This collaboration has taken two forms: business participating in activities in business schools and business schools participating in activities in business. The former includes business providing financial support to business schools, executives serving on the advisory boards of business schools, and business leaders teaching or speaking in business classes. The latter includes faculty/staff serving on corporate boards, faculty/staff working as consultants or researchers, and students conducting field projects or working as interns. Unfortunately, these collaboration activities have not helped solve the relevance problem of management education on a broad scale. They are based on hierarchical relationships and largely have been limited to personal and local connections between business executives and schools (AACSB International, 2006). In order for the collaboration to have more positive impact on management education, we propose joint creation of management knowledge between the business school and business communities.

Joint Creation of Management Knowledge

Traditionally, each party, the business school or business, tends to do what it has been accustomed to do in its own field and "neither tribe is universally attracted to the habits and discourse of the other" (Reynolds & Vince, 2004: 454). Facing this disconnect between the academic and business communities, Reynolds and Vince asserted that "we cannot overemphasize the importance of negotiating a language

that speaks to both communities" (p.454). The challenge of accomplishing this goal is enormous, but it is worth trying because it is a key project for management learning. It needs collaboration beyond the personal and local level to the industry-wide level, as suggested by AACSB International (2006).

A starting point for negotiating a language speaking to both communities is to integrate both academic and experiential knowledge. Managers often prefer experiential knowledge due to its implications for immediate application in a specific context, while academics often focus on academic knowledge whose models and frameworks tend to be oriented toward a longer time horizon and broader scope. The integration of the two types of knowledge is a solution to the conflict existing between the two communities (Augier & March, 2007). It is a consensus building project which helps remove misconceptions and mistrust. It is also practically important because effective management needs to balance firms' short-term operation and long-term development (Brotheridge & Long, 2007). Experiential knowledge contributes to the former effort and academic knowledge to the latter.

To build consensus, both academics and managers need to recognize the role of each type of knowledge. On the academic's side, a key element is the understanding that the business context entails more than economic and technical issues. It also has historical, social, political, and philosophical dimensions (Dehler et al., 2001). It is imperative to change the traditional simplification approach to business management, which has generated management knowledge that is not just undesirable but inaccurate (Grey & French, 1996). On the manager's side, the traditional perception of academic knowledge needs to be changed. John Reed, the former chairman of CitiCorp and interim chairman and CEO of the New York Stock Exchange, commented that an understanding of underlying ideas and theories can help business people perform activities more intelligently and more effectively. From this standpoint, basic theoretical frameworks should not be sacrificed for the purpose of achieving immediate business relevance in management education (Augier, 2006).

In order to integrate the two types of knowledge, academics and practitioners need to work together. Practitioners' ideas should be given "equal standing" with those of academics and both parties should negotiate meanings through dialogue, draw on theories, and develop thinking that informs their actions (Elliott & Reynolds, 2002). Academics can also conduct research with practitioners (Latham, 2007), invite practitioners to serve on boards of scholarly journals, create new journals with them, and include their insights in textbooks (Cohen, 2007). The joint creation of management knowledge is a way to bridge the academic and business worlds, but the conflict between them is unlikely to be eliminated (Augier & March, 2007). According to Augier and March, management education "reflects both managers and educators," and it is their unsolvable conflict that provides opportunities for making management education more useful.

The joint creation of management knowledge can benefit both business schools and the business community. For business, a main challenge is to find capable employees who can manage in today's turbulent environment (AACSB International, 2006). To accomplish this goal, many firms have established their own corporate universities to train employees. One limitation is that this type of training tends to emphasize experiential knowledge. As a result, it often loses the depth of insight that is found in academic settings (Mintzberg & Gosling, 2002). When realizing the importance of academic knowledge, business executives are likely to tap into the academic resources in a better way. They may reexamine their human resources policies and avoid the contradictory behaviors, for example, touting the need for well-rounded students, but hiring those with immediate specialized skills (Rynes et al., 2003).

The new competitive environment of management education poses challenges to the survival of the traditional business schools. How do they compete effectively with the new entrants and other non-traditional education programs? What will be their competitive advantage? The leading business schools' positions are not likely to be unseated due to their reputation and recognition. For schools without elite

status, a main challenge is establishing competitive positions in the academic context. They cannot return to the "trade school" model, nor can they deliver education in the "ivory tower." The best choice is to look for sources of competitive advantage through integrating both academic and practical sides of business, which requires joint creation of management knowledge by business schools and business.

As we argued above, the joint creation of management knowledge needs an industry level collaboration between business schools and business. However, current structures and processes are unlikely to promote their partnership beyond the personal and local level (AACSB International, 2006). A third party is needed that can play a leadership role, serve as a facilitator, and help bridge the two communities. Because of its unique position, AACSB can provide a link for business to have a voice in management education. It can also help establish a structure through which the interests of both academic and business communities be addressed, communication barriers removed, and mutual trust improved. Other professional organizations such as Academy of Management (AOM) also can serve as a bridge. By reaching out to their business counterparts (e.g., business and professional associations, industry groups, and regional and federal chambers of commerce), they can support the translation of academic knowledge for practitioners and practical experience into a core body of knowledge (Rynes, 2007).

New Educational Models Revisited

It will be a great challenge for business schools to seek relevancy in today's environment without returning to the earlier trade school model (Clinebell & Clinebell, 2008). The new educational models, such as student-as-partner model, student-as-client model, the professional model, and critical management education, may provide new perspectives and avoid repeating history, but obstacles still exist in implementation. Without participation from the business community, all these models have limited value from a practical point of view. The joint creation of management knowledge between business schools and business can help reduce obstacles if these models are put into practice.

Whether students are junior partners or clients, they are at least not treated as customers. This is an important merit of the partner model and the client model. But if business continues its under-emphasis on academic knowledge and overemphasis on experience knowledge and short-term interests, students will adopt these preferences. Business schools will continue to experience the tension between catering to students and upholding academic standards and walk "a tightrope between the academic side of business and the practitioner side" (Clinebell & Clinebell, 2008: 99). If business schools and the business community join together, complement each other, co-create management knowledge, and use it in management education, it will be easier for faculty to play the senior partner role or professional role when dealing with students.

Treating business management as a true profession is not easy, but we believe that the joint creation of management knowledge between business schools and business is a starting point. As a true profession, knowledge can be codified and certified for its effectiveness (Mintzberg, 2004). In reality, it's difficult. Management knowledge, as we know it, is often contextual. Therefore, Mintzberg argued that effective managing happens "where art, craft, and science meet." If any certifiable management knowledge exists, it can only be created and identified by both academics and managers. Professions have codes of conduct. It is challenging to teach professional codes effectively in business schools because they do not have binding forces. But if the codes are recognized and supported by business, teaching them can be more effective. Joint creation of management knowledge helps bring the two communities closer, thus promoting the involvement of the business community in enforcing the codes.

According to Bridgman (2007), business schools do not seem to lack a critical orientation. In fact, academics are trained to challenge the conventional wisdom through teaching and research. The problem is their failure to engage with external stakeholders. "Critical scholars in the academy write for the

academy and speak to the academy" (Mir & Mir, 2002: 119), so they have little influence on the external world (Parker, 2002). In order to make critical management education more useful, academics and managers need to work collectively to generate ideas for questioning (Reynolds & Vince, 2004). Though Reynolds and Vince's argument is related to teaching working managers, it can be extended to broader management education. Management education equips students with management knowledge. If management knowledge is created by both academics and managers, managers also need to constantly question their own assumptions and established practices. The notion of best practices is uncritical.

CONCLUDING COMMENTS

Facing the rise of Japan and its invasion into the American business world decades ago, critics commented that the "competitive performance of the [American] economy declined as business enrollments grew" (Cheit, 1985: 43). Why was business education unable to contribute to the national economy? People cannot help but question its relevance. Though business schools are responsible for the less than satisfactory result, the business community also has contributed to the current state of affairs. Better communication is needed, but it is not sufficient to resolve disparities (Knights & Scarbrough, 2010). More importantly, the two communities need to work together and take concrete actions to contribute to their common cause: improving the overall well-being of business through cultivating capable and responsible managers.

We have provided directions for implementing significant, meaningful collaborations between the two communities. However, those directions are broad. Detailed action plans have yet to be worked out. A number of conceptual and practical hurdles will need to be overcome in order to successfully put our proposal into practice. Future research may focus on how to overcome these hurdles. First, how should the collaboration at the industry level be defined? Can AACSB or AOM sufficiently represent the academic community? Can industry or professional associations sufficiently represent the business community? Second, how should the academic and experiential knowledge be balanced? The effectiveness of management knowledge is highly contextual. How may business contexts affect this balance? Third, we argue that joint creation of management knowledge can help implement the new educational models. More specifically, how can this initiative contribute to the partnership or the client relationship between faculty and students, to business management as a profession, and to critical education? For example, the professional model emphasizes professional codes. How may joint creation of management knowledge help specify and enforce those codes?

Steffy and Grimes (1986) stated that organization science and practicing organizations should be perceived as a single language community. This statement is consistent with Reynolds and Vince's (2004) assertion of the importance of a common language used by both academics and practitioners. Academics need to reconsider the role of practitioners. Management is more about practice and activity (Grey, 2004). Management ideas are more likely to be generated through the interaction between academics and practitioners rather than by the former alone and then disseminated unilaterally from the former to the latter (Reynolds & Vince, 2004). From this perspective, we have every reason to advocate joint creation of management knowledge between business schools and business.

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FIELD TESTING A BEHAVIORAL TEAMWORK ASSESSMENT TOOL WITH U.S. UNDERGRADUATE BUSINESS STUDENTS

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ABSTRACT

Given the ubiquitous utilization of teams in U.S. workplaces, collegiate schools of business have responded by placing great emphasis on the assessment and development of teamwork skills. Employing a methodology first proposed by Hobson and Kesic (2002) for use in managerial training, this study involved the behavioral assessment of teamwork skills in a sample of 247 undergraduate business students. The evaluation tool consisted of 15 positive and 10 negative teamwork behaviors. A leaderless group discussion exercise was utilized with 5-person teams, working together to solve a problem in a 20-minute period. Team interaction was videotaped and analyzed to produce ratings (on a 0-4 scale, from never to always) for each student on the 15 positive behaviors, 10 negative behaviors, as well as an overall score (the sum of the 15 positive behaviors minus the sum of the 10 negatives). Data analysis provided means for all 25 individual items on the teamwork assessment tool and norms for overall teamwork scores. A full factorial ANOVA indicated essentially no demographic differences in overall scores as a function of sex, age, race/ethnicity, or major. Potential uses of this assessment methodology in teaching, student coaching, and accreditation are discussed.

JEL: I21, I23

KEYWORDS: Teamwork, Team skills, Teamwork Education

INTRODUCTION

The widespread use of teams in modern workplaces has been recognized and documented (Cannon-Bowers & Bowers, 2011; Nielsen, Sundstrom, & Halfhill, 2005; Thompson, 2011). Given the vital importance of teams in organizational functioning, businesses in the United States have called upon higher education to improve the ways in which it assesses and develops student teamwork skills. For example, in a 2009 national survey of U.S. businesses, conducted for the Association of American Colleges and Universities, 71% of employers wanted schools to place more emphasis on "teamwork skills and the ability to collaborate with others in diverse group settings" (Hart Research Associates, 2009, p. 2). More recently, Selingo (2012) noted in the Chronicle of Higher Education (September 12, 2012) widespread and continuing employer complaints about the lack of teamwork skills among new college graduates. Not surprisingly, U.S. collegiate business schools have been responding to these market demands by including teamwork assignments throughout the curriculum (Chen, Donahue, & Klimoski, 2004; Halfhill & Nielsen, 2007; Holtham, Melville, & Sodhi, 2006; Hughes & Jones, 2011; Page & Donelan, 2003; Sashittal, Jassawalla, & Markulis, 2011). However, while the emphasis on teamwork in higher education has clearly increased in recent years, the expanded coverage has not necessarily led to higher levels of teamwork skill among students and several serious assessment-related problems have been identified (Hansen, 2006; Hughes & Jones, 2001). In this paper, we attempt to address these problems by field-testing a behavioral tool for the assessment and development of teamwork skills among

business students. Our methodology provides instructors with the opportunity to directly observe and evaluate the teamwork performance of individual students, and provides a framework to offer behaviorally specific feedback/coaching. The following section describes the relevant literature. Next, we discuss the methodology and data used in the study. Following the methodology section, we present our results and findings. The paper closes with concluding comments, along with a discussion of potential limitations and future research possibilities.

LITERATURE REVIEW

At the individual level, most researchers would agree that teamwork is a set of behavioral skills (Hughes & Jones, 2011; Thompson, 2011). Student teamwork performance, therefore, should be assessed using behaviorally based instruments. Unfortunately, this has not been the case in U.S. collegiate schools of business. Several authors have identified serious problems with how educators assess student teamwork proficiency, including the complete lack of any assessment, the reliance on written tests, flawed grading systems for teamwork projects, lack of direct observation of student teamwork performance, and lack of a basis and mechanism for individual student teamwork coaching, practice, and improvement. We consider each of these below. Perhaps Hansen (2006) offered the most damning criticism of teamwork assessment in collegiate business schools. He contended that the majority of business school faculty who use student teams do not offer any instruction on teamwork or assess student teamwork proficiency. Rather, most professors simply place students into teams and make no effort to teach or evaluate teamwork. Hansen attributed this widespread and unfortunate phenomenon to classroom time constraints that precluded opportunities to teach or evaluate teamwork and a general lack of faculty familiarity with the teamwork and teambuilding literature. Two popular written tests have been developed and used to assess teamwork. They include the Teamwork Test (Stevens & Campion, 1999) and the Team Role Test (Mumford, Campion, & Morgeson, 2006; Mumford, Van Iddekinge, Morgeson, & Campion, 2008). Hughes and Jones (2011) evaluated the potential utility of these two tests in assessing student teamwork skills. They argued that the developers designed the instruments to measure knowledge of teamwork, as opposed to actual teamwork skill levels. Furthermore, the tests do not provide feedback to students to help them improve their teamwork skills. Consequentially, while employers have successfully utilized these tests in the hiring process, they have limited value in assessing student teamwork proficiency.

Sheppard (1995) noted the negative impact of poor grading schemes for student teamwork projects on motivation and productivity. Any grading scheme that does not allow for the accurate assessment of individual contributions in teamwork projects is seriously flawed and likely to impair both individual member and overall team performance. For example, giving everyone on a student team the same grade for their teamwork project ignores the often substantial differential contributions of individual members. In such instances, those who contributed the least receive the same reward as the top contributors, clearly creating substantial inequity. Likewise, basing some portion of a student's teamwork grade upon ambiguous trait-based ratings (i.e., initiative, cooperation) from untrained peer teammates can lead to serious questions about rating accuracy and validity.

In his review of several methodologies for assessing individual performance, Meister (1985) highlighted the particular importance of direct observation of behavioral frequency and/or duration. Building upon this work, Baker and Salas (1992) identified behavioral observation as an essential principle for measuring individual teamwork. Effective assessment of student teamwork skills must involve the systematic observation and evaluation of behavior in a team environment. Thus, assessments of individual student teamwork proficiency that fail to include direct behavioral observation (i.e., using paper and pencil tests or the grade on a team project) are inadequate and incomplete measures of teamwork skill levels. Bain (2004) and Fink (2003) have cogently argued that developing behavioral skills, such as teamwork, among students necessitates a behaviorally specific assessment process that provides students with feedback on strengths and weaknesses. Ideally, students should not be re-assessed

until they have had continuing opportunities to practice and improve their teamwork skills. Hughes and Jones (2011) asserted that instructors are in a unique position to observe and evaluate student teamwork skills using a behaviorally specific assessment tool. They also noted that instructors could play invaluable roles in coaching students based upon their assessment results. Approaches to evaluating student teamwork proficiency that fail to measure specific behaviors and provide a basis/mechanism for improvement coaching (written tests, overall team project grade) are inadequate for the educational objectives of teamwork skill assessment and development.

Wiggins (1998) offered a general evaluation methodology that provides a promising potential solution to the teamwork assessment challenges facing schools. This methodology is "educative assessment" and involves the direct observation and evaluation by instructors of students engaged in team activities, followed by specific behavioral feedback/coaching designed to improve future performance. Instructors should conduct the assessment process multiple times to gauge student progress. Wiggins' methodology demonstrates that the assessment tool is an essential element in student learning.

The field of industrial/organization psychology offers a managerial selection tool, called the leaderless group discussion (LGD) exercise, which could readily be adapted as an "educative assessment" for teamwork skills in college courses. The LGD involves posing a problem to a small group of individuals (5-6) seated around a table and asking them to generate a solution within a specific amount of time. No one is appointed as the leader; thus the "leaderless" group discussion. Typically, the evaluator videotapes the exercise and then uses the videotape to assess the teamwork behaviors of each individual.

According to Ansbacher (1951), the German military first used the LGD as a personnel evaluation tool (1920 to 1931). In the United States, Bass (1954) and colleagues subsequently introduced the methodology and conducted extensive research with it. Presently, many large and mid-sized United States firms commonly use the LGD as an important component of managerial assessment centers (Arthur and Day, 2011). In recent years, LGD's have also been utilized within assessment centers designed to evaluate the managerial skills of collegiate business students (Bartels, Bommer, & Rubin, 2000; Riggio, Mayes & Schleicher, 2003). Hobson and Kesic (2003) proposed a behavioral teamwork assessment tool for use with LGD exercises in corporate training and development programs that addresses many of the evaluation criticisms discussed above. Their approach focuses on individual performance in an actual team activity, utilizes a behavioral framework (15 positive and 10 negative behaviors) to assess individual teamwork, and allows an evaluator to directly observe and critique individual performance. It also provides a comprehensive, behaviorally based framework for performance feedback and coaching, and offers a "baseline" measure of performance for use in customizing instruction and gauging improvement. Professors can easily modify this instrument for the collegiate environment.

This study addressed four objectives. First, we field tested an adaptation of the Hobson & Kesic assessment methodology using United States business school undergraduate students. Second, we identified existing teamwork strengths and weaknesses among students. Third, we developed preliminary norms for overall teamwork scores in the sample. Fourth, we investigated demographic differences in overall teamwork scores as a function of gender, age, ethnicity, and major.

METHODOLOGY

The sample consisted of 247 undergraduate students enrolled in a senior level teamwork course in an Association to Advance Collegiate Schools of Business (AACSB) accredited business school at an urban regional commuter campus of a large state university in the Midwest. The campus has an enrollment of 6,000 and the business school has 500 students. We collected data during the fall, spring, and summer semesters, from 2009 through 2011.

Teamwork Course and Team Formation

The teamwork course was a senior-level requirement for all business majors and recommended for business minors, with two pre-requisites--organizational behavior and introductory psychology. The course syllabus indicated that there would be team videotaping at the beginning and near the end of the semester, followed in each instance by individual performance feedback sessions with the instructor and a peer coach. Given the time-consuming team videotaping and individual coaching requirements in the course, we capped course enrollment at 30. This allowed for six teams comprised of five students in each class. At the beginning of the semester, after initial introductions in class, teams were formed by "counting off by sixes," first by the female students and then by the male students (for purposes of gender heterogeneity within each team). The instructor reviewed these preliminary teams for the presence of friends or teammates from previous classes. If friends or previous teammates were present in a particular team, the instructor made appropriate substitutions/replacements with individuals from other teams. The goal was to have a set of six newly formed teams, in which members did not have close prior familiarity with each other. The instructor had team members exchange contact information and scheduled the teams for their initial leaderless group discussion (LGD) videotaping. Teams completed the LGD during one of the following two class meeting times. The only instructions the instructor gave the students were to attend the scheduled taping and to work together on a team exercise.

LGD Development and Utilization

The LGD exercise took place in a classroom that was hard-wired with video and sound equipment. Team members sat in a semi-circle, which allowed for a panoramic view of the entire team, as well as close-up shots of individual team members. The instructor briefed students on the topic for discussion and the need for written output from the team at the end of the session. The topic dealt with a general teamwork issue -- formulate a rank-ordered list of the seven most frequently encountered obstacles to effective teamwork and two solutions for each obstacle. The instructor asked students to introduce themselves at the onset of the taping. Following the format used by Bartels et al. (2000), LGD sessions ran for exactly 20 minutes. At the conclusion of their meeting, the team submitted the written output from their session. The Instructional Technology Department videotaped each LGD and produced a DVD containing all six of the 20-minute team sessions for a given class. Technicians provided a split-screen video image consisting of a close-up of the person speaking in the upper half and a constant panoramic view of the full team in the bottom half. The professor provided a copy of the class DVD to each student.

The Teamwork Evaluation Form, first developed and reported by Hobson and Kesic (2002) provided the framework to assess student skill levels. It consists of 15 positive behaviors and 10 negative behaviors. After observing an individual's interaction in a team exercise, a rater is directed to use a 0-4 (Never to Always) Evaluation Scale, similar to that used originally by Bass (1954), in assessing the frequency of occurrence of each of the 25 specific behaviors. For example, if a particular individual never gave positive feedback to a teammate, his/her score for that behavior would be zero, while constant active listening to teammate comments would justify a score of four.

The instructor, an industrial/organizational psychologist with extensive research, training, and consulting experience with teams, reviewed team videos and completed a Teamwork Evaluation Form for each individual. We calculated an overall score for each person by summing the item scores for the 15 positive behaviors and subtracting the sum of the item scores for the 10 negative behaviors. The range for overall scores is -40 (score of 0 for all of the positive behaviors and 4 for all of the negative behaviors) to 60 (score of 4 for all 15 of the positive behaviors and zero for all of the negative behaviors).

Table 1: Teamwork Evaluation Form

Directions: Use the 0-4 (Never-Always) scale below to evaluate the target person on the specific behaviors listed.

0-4 Evaluation Scale

0 = Never 1 = Rarely 2 = Occasionally 3 = Frequently 4 = Always

Positive Behaviors	Negative Behaviors
1. Listened attentively (eye contact, comprehends) when teammate was talking	1. Failed to offer verbal input to team discussion
2. Piggy-backed on teammate idea	2. Interrupted teammate who was talking
3. Gave positive feedback to teammate (that's a good idea)	3. Gave personalized, derogatory criticism to teammate
4. Politely asked for input from a quiet teammate	4. Brought-up topic that was completely unrelated to the team discussion
5. Offered task-related input during team discussion	5. Started a side conversation while teammate was talking
6. Took notes on team discussion	6. Dominated discussion by failing to allow others to talk
7. Attempted to achieve win-win resolutions to conflict	7. Refused to compromise
8. Kept team focused and "on-track"	8. Insisted that his/her idea was the only correct one
9. Sought clarification by asking questions or paraphrasing	9. Inappropriately tries to create humorous situations
10. Called teammates by their first name	10. Pessimistic, negative, and/or complaining
11. Summarized areas of team agreement and disagreement	
12. Constructively criticized teammate ideas, not the person	
13. Appropriately used humor to help team stay relaxed	
14. Answered teammate question	
15. Expressed empathy for teammate feelings	

This is the teamwork assessment tool used in the study. A 0-4 scale is used to rate 15 positive and 10 negative teamwork behavior.

For each student in the sample, we collected and computer entered the scores from the instructor-completed Teamwork Evaluation Forms and basic student demographic information, including sex, age, race/ethnicity, and major. We used SPSS to conduct data analyses. First, we calculated descriptive statistics for all variables in the dataset, including individual items on the Teamwork Evaluation Form and demographics. Second, we calculated overall scores on the Teamwork Evaluation Form, as well as sub-group scores on the positive and negative items. Third, we calculated norms for overall scores on the Teamwork Evaluation Form, in terms of percentile ranks, measures of central tendency (mean, median, and mode) and dispersion (range and standard deviation). Lastly, we compared demographic sub-group means using exploratory factorial ANOVA.

RESULTS AND DISCUSSION

Table 2 provides a summary of the demographic characteristics of the student sample of 247, in terms of sex, age, race/ethnicity, and major.

Table 2: Demographic Characteristics of Student Sample of 247

Sex	Female:		142 (57.5%)
	Male:		105 (42.5%)
Age	19-22:		91 (38.7%)
	23-27:		81 (32.8%)
	28-57:		67 (28.5%)
Race/	African American:		41 (16.6%)
Ethnicity	Caucasian:	Hispanic-	159 (64.4%)
	American:	Other:	32 (13.0%)
			15 (6.0%)
Major	Management:		172 (69.7%)
	Accounting:		63 (25.5%)
	Double:		7 (2.8%)
	Other:		5 (2.0%)

This table provides category frequencies and relative percentages for four demographic characteristics in the student sample of 247: sex, age, race/ethnicity, and major.

Means on the five point scale (0=Never, 1=Rarely, 2=Occasionally, 3=Frequently, and 4=Always) for the 15 positive items in the Teamwork Evaluation Form are provided in Table 3. The values ranged from a low of 0.17 for "attempted to achieve win-win resolutions to conflict" to a high of 3.25 for "listened attentively." In addition to "listened attentively," the top five rated positive behaviors included "answered teammate question" (3.06), "offered task-related input during team discussion" (3.05), "sought clarification by asking questions" (2.79), and "gave positive feedback to teammate" (2.29).

Table 3: Means for 15 Positive Behaviors

15 Positive Behaviors		Means
1.	Listened attentively (eye contact, comprehenders) when teammate was talking	3.25
2.	Piggy-backed on teammate idea	1.79
3.	Gave positive feedback to teammate (that's a good idea)	2.29
4.	Politely asked for input from a quiet teammate	0.43
5.	Offered task-related input during team discussion	3.05
6.	Took notes on team discussion	1.95
7.	Attempted to achieve win-win resolutions to conflict	0.17
8.	Kept team focused and "on-track"	2.15
9.	Sought clarification by asking questions or paraphrasing	2.79
10.	Called teammates by their first names	0.57
11.	Summarized areas of team agreement and disagreement	0.77
12.	Constructively criticized teammate ideas, not the person	0.96
13.	Appropriately used humor to help the team stay related	0.86
14.	Answered teammate question	3.06
15.	Expressed empathy for teammate feelings	0.23

This table lists the 15 positive behaviors in the Teamwork Evaluation Form and the calculated mean frequency scores on a five-point scale.

The five lowest rated items, beginning with "attempted to achieve win-win resolutions to conflict" (0.17), included "expressed empathy for teammate feelings" (0.23), "politely asked for input from a quiet teammate" (0.43), "called teammates by their first names" (0.57), and "summarized areas of team agreement and disagreement" (0.77). Students rarely demonstrated overt conflict during the team exercises. Thus, opportunities for win-win conflict resolutions were very limited. Similarly, during the 20-minute videotaped session, participants infrequently shared their feelings about the topic under discussion and instead focused on factual/experiential information. Thus, opportunities to express empathy for teammate feelings were substantially restricted.

Mean values for the 10 negative items are provided in Table 4. Four items had a mean of 0 (items 6, 7, 8, and 10), while the highest was 0.17 for "interrupted teammate who was talking." Information in the table confirms that the base rates for the negative behaviors were negligible and that student team participants were successful in largely avoiding these problematic areas. We calculated Overall Teamwork Evaluation Form scores by summing scores on the 15 positive items and 10 negative items, and then subtracting the negative sum from the positive sum. Central tendency measures for the resultant distribution of overall scores were calculated. The Mean was 23.9, Median was 24.0 and Mode was 23.0. As for dispersion measures, the Range was 47 (6 to 53) and Standard Deviation was 7.4.

Table 4: Means for 10 Negative Behaviors

10 Negative Behaviors		Means
1.	Failed to offer verbal input to team discussion	0.05
2.	Interrupted teammate who was talking	0.17
3.	Gave personalized, derogatory criticism to teammate	0.01
4.	Brought-up topic that was completely unrelated to the team discussion	0.06
5.	Started a side conversation while teammate was talking	0.06
6.	Dominated discussion by failing to allow others to talk	0.00
7.	Refused to compromise	0.00
8.	Insisted that his/her idea was the only correct one	0.00
9.	Inappropriately tried to create humorous situations	0.08
10.	Pessimistic, negative, and/or complaining	0.00

This table lists the 15 positive behaviors in the Teamwork Evaluation Form and the calculated mean frequency scores on a five-point scale (0=Never, 1=Rarely, 2=Occasionally, 3=Frequently, and 4=Always).

Percentiles from 5 through 95 (by 5's) and associated overall scores are provided in Table 5. They range from a low overall score of 12.00 for the 5th percentile to a high of 36.30 for the 95th percentile.

Table 5: Percentile Equivalents for Overall Teamwork Evaluation Form Scores

Percentiles	Overall Scores
5	12.00
10	14.00
15	16.00
20	17.00
25	18.00
30	20.00
35	21.00
40	22.00
45	23.00
50	24.00
55	25.00
60	26.00
65	27.00
70	28.00
75	28.50
80	30.00
85	31.00
90	33.00
95	36.30

This table contains the percentiles from 5 through 95 (by 5's) and the associated overall scores on the Teamwork Evaluation Form.

An exploratory 2 X 3 X 4 X 2 (Sex X Age X Race/Ethnicity X Major) factorial ANOVA was conducted to assess the impact of the four demographic factors on overall Teamwork Evaluation Form Scores. Categories for each of the independent variables were: Sex (Female, Male), Age (19-22, 23-27, 28-57), Race/Ethnicity (African-American, Caucasian, Hispanic-American, Other), and Major (Management, Accounting). Due to the small number of "double" (n=7) and "other" (n=5) majors, both were removed from this analysis in order to maintain a focus on differences between the two primary majors and to reduce the incidence of cells in the full factorial with frequencies of zero. Table 6 provides a summary of the full factorial ANOVA statistical results.

Table 6: Full Factorial ANOVA Results

Source	Sum of Squares	df	Mean Square	F.	Sig.	Partial Eta Squared
Sex	43.253	1	43.253	0.879	0.350	0.005
Major	205.309	1	205.309	4.173	0.066[1]	0.021
Race	353.348	3	117.783	2.394	0.070	0.036
Age	112.392	2	56.196	1.142	0.342	0.012
Sex X Major	33.414	1	33.414	0.679	0.411	0.003
Sex X Race	19.754	3	6.585	0.134	0.940	0.002
Sex X Age	47.465	2	23.733	0.482	0.618	0.005
Major X Race	120.746	3	40.249	0.818	0.485	0.012
Major X Age	34.142	2	17.071	0.347	0.707	0.004
Race X Age	875.494	6	145.916	2.966	0.009	0.084
Sex X Major X Race	375.106	3	125.035	2.542	0.058	0.038
Sex X Major X Age	29.435	2	14.718	0.299	0.742	0.003
Sex X Race X Age	79.916	5	15.983	0.325	0.898	0.008
Major X Race X Age	155.446	4	38.861	0.790	0.533	0.016
Sex X Major X Race X Age	2.025	1	2.025	0.041	0.839	0.000
Error	9,543.645	194	49.194			

[1] *Based on an estimated pairwise comparison of mean scores for Management and Accounting. This table provides a summary of the statistical results for the full factorial ANOVA conducted on Overall Teamwork Evaluation Form scores, as a function of Sex, Major, Race/Ethnicity, and Age. Columns in the table consist of: (1) the source of variances, (2) the sum of squares associated with the variance source, (3) the associated degrees of freedom, (4) the calculated mean square value, (5) the computed F-value, (6) the significance or probability level associated with the F-value, and (7) the calculated effect size, expressed as a partial eta squared value.*

Factorial ANOVA results indicated that there were no statistically significant main effects for any of the four demographic variables and only one significant interaction. The two-way ANOVA, Age X Race/Ethnicity, produced an F = 2.97, df = 6,194, p = 0.009, and partial eta-squared = 0.08. A follow-up,

confidence interval-based (95%) evaluation of the means for the 12 combinations of Age by Race/Ethnicity indicated that only one pair of means was statistically different. The mean for Hispanic-Americans ages 28-57 (30.0) was significantly larger than that for African-Americans, ages 23-27 (14.4). Given that the three Age categories simply divided the sample into approximate thirds, the statistically significant interaction of Age X Race/Ethnicity is likely a chance finding with no theoretical or practical significance.

CONCLUSION

While the coverage of teamwork in U.S. collegiate business schools has surged in recent years, researchers have documented serious concerns regarding the methods utilized to assess student teamwork proficiency. This article attempted to address these concerns by field-testing a behavior-specific assessment tool, using data from 247 college students, videotaped while working in teams.

One can reasonably draw four conclusions from the findings in this study. First, the Hobson and Kesic teamwork assessment methodology, originally formulated and used for managerial development, provided a practical and comprehensive framework for instructor evaluation of student teamwork skills. Instructors can use the behavioral results obtained from this methodology for many educational purposes, including providing performance feedback and coaching for individual students and classes and customizing course content to address identified weaknesses within a class. Instructors can also evaluate progress of individual students and classes. Lastly, educational institutions can use this methodology to document behaviorally based learning outcomes for program evaluation and accreditation.

Additionally, this methodology explicitly addresses several of the major criticisms concerning how collegiate business schools assess teamwork in their curricula. Educators can measure student teamwork performance using specific observed behaviors, as opposed to scores on a written test or grades on a final project. Instructors are directly involved in observing and rating student teamwork behaviors and the availability of behavioral ratings provides a comprehensive framework for coaching individual students and measuring their progress. Second, in terms of student strengths on the Teamwork Evaluation Form, three of the 15 positive behaviors had means above 3.0 ("frequently" on the five-point rating scale): (1) "listened attentively" (3.25), (2) "answered teammate question" (3.06), and (3) "offered task-related input during team discussion" (3.05). Base rates on the 10 negative teamwork behaviors were so low (mean values ranging from 0.00 to 0.17) that areas for improvement would likely need to include positive behaviors with low scores. Third, norms for overall teamwork scores evidenced substantial variation in student performance, with a range of 47 points (from 6 to 53 and median of 24.0) and a standard deviation of 7.4 (with an associated mean of 23.9). Calculated percentiles for overall scores can provide both students and instructors with useful interpretive information about relative performance. Fourth, there were essentially no significant demographic differences in overall teamwork performance as a function of sex, age, race/ethnicity, and major. Thus, although the student sample was demographically quite diverse, these differences did not affect overall teamwork scores.

One should consider five potential limitations when interpreting the results of this study. First, the task performed by student teams was non-controversial and had no future impact on individual teammates. This differs from many workplace team tasks, which can involve controversial issues that have a significant impact on members. Second, the time allowed for task completion in the Leaderless Group Discussion (LGD) exercise was only 20 minutes. Team meetings often take much longer than 20 minutes and afford participants more opportunities for input and interaction. Third, students may experience apprehension over the videotape, which could function to inhibit participation in the exercise and limit the exhibition of negative behaviors. Fourth, only one instructor rated student performance in this study using the Teamwork Evaluation Form. Fifth, the sample consisted of students enrolled in a teamwork course at

a commuter campus of a Midwestern university. Students from other areas of the United States, other types of educational institutions, or other countries may behave differently in the LGD exercise.

Based upon the results obtained in this study, future research would be useful in the following areas. First, it would be helpful to use this teamwork assessment methodology in other educational institutions with other students and instructors to evaluate its generalizability. Second, an expanded, more diverse sample of students would allow for a recalculation of norms for overall teamwork scores and a more comprehensive investigation of potential demographic differences. Third, an international comparison of student performance would be especially interesting. Fourth, studies involving the use of two instructors evaluating each student would allow for the calculation of inter-rater reliability for the Teamwork Evaluation Form. Fifth, evaluation research is needed to examine the use of this teamwork assessment methodology as a framework for: (1) coaching individual students, (2) customizing course instruction, (3) evaluating individual student progress, (4) evaluating class performance and instructor effectiveness, and (5) documenting behavioral learning outcomes for program review and accreditation purposes. Finally, efforts to explore longitudinally the external validity of the teamwork tool by correlating student scores with subsequent placement success, starting salaries, performance appraisal ratings, and progression in management would be very interesting.

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EVOLUTION OF A BUSINESS PROGRAM DESIGNED TO DEVELOP STUDENTS' KNOWLEDGE AND SKILLS

Karel Updyke, Butler University

ABSTRACT

This paper describes the 20-year evolution of the College of Business in developing a comprehensive, four-year professional and career development program for students. We began by designing a "business spine," a series of courses introducing students to the tools of business decision-making. The spine culminated by requiring each business major to complete two internships, consisting of at least 300 hours of work experience. We now understand that students also need to acquire a variety of skills over four years, on their paths to becoming business professionals. We show the importance to students' success of experiential learning, including internships, mentoring, and skill-development. Students now take freshman and sophomore business experience courses, meet with their career mentors over their four years, and participate in a variety of workshops and other activities and events to help them learn business and professional skills and attitudes. We believe this comprehensive, four-year program contributes to our nearly 99% placement rates within six months of graduation.

JEL: M10

KEYWORDS: Assessment, Internships, Student learning, Experiential learning, Business Education

INTRODUCTION

In 1985, a new dean took over operations of the College of Business (COB), which he served until 1993. His vision was to build the COB into a school with a prominent reputation, at least regional if not state and national. He also wanted to compete with more well-respected state and regional schools with an innovative and tailored approach; in other words, on Butler's terms and strengths rather than trying to compete with big state research schools head-on. His guiding motto was to make Butler COB into a "small jewel of a business school." His primary innovation was to design a program which bridged the gap between the business and academic worlds. In developing and implementing his innovative vision, the dean addressed the criticism, even then, about the relevance of business education. Various streams of literature seemed to have informed his vision, but it seems to be derived from criticisms of higher education in general and business education in specific. Many authors point out these criticisms, which still remain relevant today for most business schools.

The dean envisioned emphasizing the development of student skills in addition to the traditional teaching of business content, to address the deficiencies he and others saw in business education. Internships could be considered the epitome of experiential learning, and in the dean's mind, they would be the focal point and culmination of the business curriculum. In addressing innovation in business education, we might consider business schools' failure to address much in the education except content of disciplines such as accounting, marketing, etc. However, the business community keeps demanding but not getting a workforce also trained in both hard skills (thinking and problem solving) and soft skills (interpersonal, communication, empathy, etc.). The body of literature about experiential education suggests that it can be used to enhance students' knowledge, and also encourage and support their skills development.

Thus, the dean thought that required internships, and the preparation of students to undertake such internships, could well address the issues in business education. He developed a program called the "business professional spine," designed specifically to address the issues. The spine was originally

designed to begin in the freshman year with a one-hour course as an introduction to business. It was continued in the sophomore year with courses in information technology tools, as well as critical and creative thinking. In the junior year, students took courses in the application of information technology, as well as their first internship. Finally in the senior year, the spine culminated in the second internship.

Butler University is close to downtown Indianapolis, a city with a population of about 830,000. About 4,500 students enroll in one of six colleges, including fine arts, communications, business, education, pharmacy, and liberal arts. Today, more than 700 undergraduate and 300 graduate students are enrolled in the COB, and choose one of seven undergraduate majors (accounting, economics, finance, international business, management information systems, marketing, and risk management) and one of two graduate programs (Masters of Business Administration and Masters of Professional Accounting). For the undergraduates, their two internships remain one of the most significant reasons they chose Butler. The COB has built its undergraduate program on the foundation of "real life, real business," which we believe formalizes the connection between academics and business, and embodies the notion of both knowledge and skills development through experiential education.

This paper describes the evolution of the early "business and professional spine" into today's academic program, which includes as a major component a comprehensive, four-year professional and career development program. We believe we have developed, through this comprehensive approach, a way to address and overcome many of the criticisms about business education. While we know we need to help students learn about traditional business topics such as accounting, marketing, economics, etc., we also believe we need to help them develop into better business professionals, with the skills and attitudes necessary to be successful in business and life. We firmly believe, and the literature supports our contention, that business schools typically fail to address the needs of the business community. This lack relates more to skills development than it does business knowledge acquisition. Therefore, we believe we need to help students develop professional attitudes and skills. We believe there is no better way to do this than through experiential education, which we implement through our career mentoring, business experience courses, and internships. The following literature review describes the theoretical support for our ideas, along the lines of mentoring, professional and career development, skills development, and finally, experiential education.

In the next sections, we outline the literature that supports the three major aspects of our program: our belief that business and professional skills are as important as business knowledge, that experiential learning is an effective tool to help students develop the skills and apply knowledge, and finally that a mentoring process helps students develop the softer, more personal skills such as teamwork and communications necessary to success in business and life in general.

LITERATURE REVIEW

A plethora of research in both academic and public endeavors and publications demonstrate the gaps in the skills and talents that employers need from their new employees and what new graduates show up to work with. After conducting a survey, reported in November 2011, FTI Consulting writes "for every skill and hiring criteria tested, decision-makers' ratings reveal a gap between stated importance and applicant performance." Companies, students, and institutions all are noting the discrepancies and looking seriously for remediation, for programs that will serve academic needs as well as professional demands.

Criticism of higher education and especially business education is not new, for example, the Accounting Education Change Commission (1990) and Pearce (1999) both pointed out the lack of relevance and practical experiences in business education. More than ten years later, Hart (2006), Abraham & Karns (2009), and the FTI Consulting group (2011) studied the correspondence between what businesses say they want and what business schools do. Sorensen (2009) suggests that business schools should help

students develop skills to take them into the future, among them being able to cope with change, thinking strategically, both of which can be developed through experiential learning, and networking and job-search skills. The dean's vision is now supported by a vast body of research, including Prince (2004), Bonwell & Eisen (1991), and Kuh (2010) suggesting that experiential learning, i.e. where students are fully engaged in their own learning, is a very effective way to help students learn both content and skills.

Several studies addressed the lack of skills students tend to exhibit after graduation. For example, FTI Consulting [2006] conducted a survey of over United States' 1,000 companies' hiring decision-makers. Commissioned by the Accrediting Council for Independent Colleges and Schools (ACICS), FTI reported two important findings: survey respondents thought prospective employees were deficient in various workplace skills and knowledge, and education institutions could do a better job preparing students for the workplace. The results show that survey respondents thought only 16% of job applicants are very prepared, while 21% were unprepared, leaving 63% in the unenviable position of being "somewhat prepared." Even worse, the survey respondents said only 7% of higher education institutions were excellent in preparing students, while 39% of institutions were only fair or poor, leaving 54% as good. Another consultant, the Peter D. Hart Research Associates, Inc., conducted a survey for the Association of American Colleges & Universities (AAC&U) initiative "Liberal Education and America's Promise" (LEAP) [2006]. Executives at 305 employers and 510 recent college graduates were surveyed. Both groups stress the importance to education of both knowledge and skills, and that a college education should help students learn knowledge as well as develop skills. In fact, 73% of the employers believed the top-ranked skill that should have more emphasis is integrative learning, which includes the ability to apply knowledge and skills to problems. Finally, Abraham and Karns (2011) studied what businesses want, what business schools want, and more importantly, what business schools tend to emphasize. One of the major issues in business education is the lack of attention to skills development, and experiential education is one very effective way to deal with that.

Experiential education includes professional mentoring and career development (etiquette, career planning, and job search), soft skills (self-awareness, interpersonal, and relationships), and hard skills development (knowledge of business disciplines, thinking, and problem-solving). Tobin (1998) writes of the impact of mentoring on future career success, and Morgan (2011) reports that becoming self-aware is a component crucial job success.

A very unique aspect central to the dean's vision was the concept of "executives-in-residence." Several authors, in academia as well as business, have pointed out the value of mentoring, such as Tobin (1998) and Morgan (2011) to students' careers. Thus, the dean hired individuals near the end of their business careers, people who wanted to help business students as they begin their professional journey. First hired in the late 1980s, one continues to serve as a career mentor, while the other pioneer executives-in-residence have retired in just the last couple of years. These people have vast experience in the regional business community, including banking and finance, health care, insurance, and other areas prominent in the region. Their role was to serve as informal advisors to students about career development, and to provide guidance during the development and delivery of the business spine courses. In some cases, they taught the spine courses. Today, we call them "career mentors," and they have a much more structured and defined role relative to students' professional and career development.

Kuh is a renowned expert in student learning and education, and he finds (2008) nine "high-impact educational practices," one of which is internships. Further, he also claims (2010) that "There are many good ideas for enhancing college achievement and helping more undergraduates succeed. Few promise to deliver as much bang for the buck as making work more relevant to learning, and vice versa."

BUTLER UNIVERSITY BUSINESS PROGRAM

The undergraduate business program currently consists of 127 hours, including about 55 hours of university core. Of about 75 hours in business, 55 hours are required of all business majors and constitute the "business core" (statistics, information systems, business experience, economics, accounting, finance, marketing, and two three-hour internships). The internships were required beginning in 1988, and were then called "cooperative education experiences." A Department of Education grant funded the program for the first couple of years, after which it became self-sufficient. The grant required two experiences, each for three academic credit hours, called cooperative education, for every student graduating from the COB. Most students enrolled in their internships during their junior and senior years, although some did as sophomores. To ensure students were adequately prepared to perform the work required by employers, over the years we added requirements. Currently, students must have junior standing, have completed at least 12 hours of upper level business courses and the first course in the major.

The requirements of the internship have always been fairly rigorous: the overriding principle has always been that it be a meaningful, productive, business work experience. Students are not allowed to use simply any job to satisfy the internship; rather it must be approved by the staff as representing a real business experience. In other words, students cannot work as a cash register operator or a secretary or a data entry clerk. Furthermore, at least one of the two internships must be directly related to the student's major. Finally, students must work at least 300 hours in their experience. While they are usually paid, unpaid experiences are acceptable. Students can complete an internship during the fall or spring semester while attending class full-time and working part-time, or they can work full-time during the summer. In the second model, they often choose to live and work in their hometowns, with about 50 percent working in Indianapolis. Several full-time positions are available to students, mostly in the public accounting profession and some with major companies that utilize full-time internship programs as a recruiting tool.

In addition to requiring fairly rigorous work experience, the faculty was always adamant that the course include a strong academic component. After all, they concluded, internship courses award three hours of credit, and in faculty minds, students earn the three hours of academic through the academic component; they do not earn three hours of credit for working. A faculty position, called the "Coordinator of the Internship Program," was created in the early days to protect, guide, and implement the academic component.

In 2002, a new dean, in developing a COB strategic initiative, wanted to expand the original vision of bridging the gap between the academic and business worlds to include more than simply two internships. He thought the internships should be but one component of a more comprehensive educational process, spanning students' entire academic career. After two years of faculty investigation, and the study of many divergent ideas and concepts, the COB adopted the foundation of "real life, real business" as the guiding principle of business education. This foundation necessitated rethinking and redesigning the entire business spine. At this point, students completed their two internships during their junior and senior years, the requirements of which were introduced to freshmen and sophomores. In administering to students' needs in finding jobs and the academic aspects of the internships, very few resources could be devoted to helping students prepare for the internship search or participation in the professional world. However, we could see that while students might be prepared to handle both finding and working at a job, they were not very well-equipped to engage in a search for an internship that could serve as a springboard to their desired career path. In other words, their preparation lacked a comprehensive, longer-term view embodied in the "real life, real business" concept.

To implement the "real life, real business" principle, we realized we needed to enhance the internship program, and redesign some components of the academic program to include a freshman business seminar and a sophomore real business experience. Whereas in the beginning, the focus was on the

internships themselves, the focus is now on students' entire professional and career development, with the internships serving as the culminating experience to a comprehensive four-year program. In addition, two new courses were added to the curriculum. In the freshman course that introduces students to business, students explore industries and develop a business plan. In the sophomore course, student teams not only develop another business plan, they can actually present it to an evaluation panel and obtain funding for the business, allowing them to operate the business during the following semester.

The current Director of the Internship Office was hired in 2002 and charged with developing the comprehensive four-year program. Under her guidance, and with internship office staff and faculty participation, a model was designed to help students progress through a four-year professional and career development program. Table 1 presents an overview of the program.

Table 1: Integration of Four Years of Career and Professional Development

Year/Activity	Freshman	Sophomore	Junior	Senior
Major focus	Self-knowledge and awareness	Career exploration	Job search process	Work experience
Major ways of implementation	– – Meet with Career Mentor and attend activities/events to complete required passport activities – –			
	DISC and MBTI – personal, teamwork, and leadership tendencies	Strong interest inventory	Building a winning resume	Getting organized and motivated for job search
	Alumni forums	Introduction to BLUE (University job search software) Alumni Career Directory	Interviewing skills and mock interviews	Keys to career / life success
	Career events	Career Research / Resume Development	Making the most of your internship	Evaluating and negotiating a job offer
	Cultural events	Information interviews, networking skills, etiquette workshop	Seeking out a mentor	Assessing a benefits package
	Community service / volunteer events	Job shadowing / information interviews	Dress for success / business etiquette	
			Leadership styles	
Formal Courses				
Non-credit (pass/fail, zero credit)	COB101Professional and Career Development I	COB201Professional and Career Development II	COB301Professional and Career Development III	n/a
For-credit	n/a	n/a	COB300 Career Planning and Development (pass/fail, 1 hour)	n/a
	n/a	n/a	COB401 Internship I (letter grade, 3 hours)	COB402 Internship II (letter grade, 3 hours)

This table provides an overview of the four years, and the major ways the focus is implemented. Each student is assigned to a career mentor, who helps guide students and ensures completion of activities and event necessary to complete the non-credit courses. Faculty members teach the for-credit courses, which have well-defined learning objectives, with assignments designed to help students demonstrate their learning.

As outlined in Table 1, career mentors concentrate during the first year on helping students develop self-knowledge and awareness. After students gain some idea of their interests and strengths, they emphasize career exploration in their second year. In the third year, they focus on applying the knowledge gained in years one and two to searching for suitable internship opportunities. Finally, in their fourth year, they concentrate on finding their second internship, and also their first post-graduate job, based on their learning and experiences during their entire four-year program. The idea is that through their four years, students should have attained these major program goals within these four overlapping areas.

The COB now houses the Office of Career Development and Student Services, which provides and manages the structure and mechanisms through which to implement the four-year program. The Office includes the professional and career development program. COB students can also utilize the services

offered by the University Internship and Career Services; however they rarely find this necessary. In Table 2, more detailed information about what students do each year, and in which class, to become young business professionals.

Table 2: What, When, and How Students Learn

Year and Focus	Formal Courses	What They Learned/Developed	How They Learned/ Developed It
Freshman year: Self-knowledge and awareness	Freshman Business Experience Course (3 hours), students learn about the global business environment while enhancing their skills such as self-awareness, thinking, problem solving, teamwork, and ethics.	A strong sense of self which they can readily articulate, through both written and oral communications, in terms of personal strengths, values, interests, accomplishments, and life/career goals An initial career path which matches their skills, values, and interests An understanding of and plans to further enhance communications skills An understanding of various definitions of success in life, and the connection between careers and success An understanding of their roles and responsibilities as individuals within communities (school, organization, city, etc.)	Attend a variety of workshops, job fairs, alumni panels, and other forums, covering resume construction, professional etiquette, job search software Perform job shadowing and mock interviews, write self-reflections, resumes, industry and job descriptions and evaluations Complete and explore self-assessment tools such as Myers-Briggs Type Indicator, Strong Inventory
Sophomore year: Career exploration	Real Business Experience course (3 hours required), students develop and present a business plan; Real Business Practicum course (3 hours optional), implement and operate the business Career Planning course (1 hour), students research, reflect, and write about short- and long-term career management issues	A broad knowledge of various industries, job functions and potential career paths To take responsibility for their own professional career development How to manage their own lifelong strategic career plans, including the skill of adapting to shifting workplace trends	
Junior year: Job search	Internship I course (3 hours), students write papers/give presentations to demonstrate their understanding of how business concepts apply to actual professional situations, and how they can use business concepts to solve business problems	Strong skills and knowledge of career planning and the job search process, e.g., resume design and content, networking, interviewing, etc. A professional demeanor, e.g., personal appearance, language, etiquette, behavior, etc. To use job search resources and strategies found in the library, Career Services, etc.	
Senior year: Work experience	Internship II course (3 hours), students write papers to demonstrate their understanding of how business concepts apply to actual professional situations, and how they can use business concepts to solve business problems	An appreciation of the connection between academic theories/concepts and their applications in organizations An understanding of the ethics of career planning and the job search process as well as ethical behavior in the workplace	

*Students enroll in a pass-fail, zero-credit course, where their career mentors monitor their completion of the activities listed in this column.

This table shows the detail of what students do each year in their for-credit and non-credit courses People who participate heavily in students' journey to career development include career mentors, internship coordinators, and the faculty instructors of the for-credit courses.

The Director of the Office of Career Development and Student Services oversees her staff, which consists of the secretary, the manager of the professional and career development program, professional "internship coordinators," and the "career mentors." At the beginning of their four-year COB education, the Director' office assigns career mentor to all students. As students begin to prepare for their first internship search, an internship coordinator is assigned to help students navigate the search and acceptance process. Students remain with their internship coordinator and career mentor throughout their educations. In addition, COB instructors teach the three for-credit courses, including Career Planning and Development, and Internship I and II.

Career mentors are mostly retired business executives, usually from the local or regional Indianapolis area, who become part of the COB to work with students. They act as mentors rather than instructors or

academic advisors, and guide students through the process of becoming young business professionals. They each guide approximately 60 students from the freshmen through senior years, and are committed to work at least 10 hours per week throughout the calendar year. In return for their stipend, the Director requires them to attend regular training and up-dating meetings. The career mentors help students explore their career interests, identify how those interests coincide with their personal strengths, goals, and skills, and acquire professional attitudes, demeanors, and knowledge. Students meet with their career mentors at least twice per semester, and often more.

The Director, manager, and the professionals serve as internship coordinators. Again, the Director assigns an internship coordinator to each student. The internship coordinators help students with the more professional part of career exploration, especially the part directly related to helping students prepare for and conduct their internship searches.

Students take three for-credit courses, which COB instructors are assigned to lead. Career Planning and Professional Development is a one-hour, pass/fail course students take in junior year in partial preparation for their first internship search. The internships themselves are also formal courses, each worth three hours of academic credit for a traditional grade.

As outlined in Table 2, students are required to attend a variety of workshops and meetings offered by career mentors and internship coordinators, covering a variety of material, such as self-assessment tools including Myers Briggs Type Indicator, Strong Inventory, how to construct a resume, professional etiquette, the job search process including formal job search resources such as mock interview software and the Butler Career Services on-line resources.

Students, guided by their career mentors, internship advisors, and internship instructors, must submit a number of short written summaries, including reflections, resumes, substantiation of job shadowing, etc. For their career mentors and internship coordinators, students must prepare resumes, participate in at least one mock interview, evaluate various industry and job opportunities, etc. For their internship instructors, students prepare academic assignments, complete with sources.

Students enroll in a series of courses beginning in the freshman year and extending through the senior year. In the first three years, the courses are zero-credit, pass/fail courses used to formalize students' activities. The three courses, called Professional and Career Development I, II, and III provide a formal record on their transcripts that students have completed the necessary activities and outputs to warrant course credit.

The career mentors and internship advisors who guide the students through these courses use a "passport," which is a little booklet resembling a real passport. Given to all students at the beginning of their freshman year, the passport is used to record all students' activities, and it provides a formal mechanism through which to monitor students' completion of passport activities. At the end of each semester, the career mentors and internship advisors forward a list of their students who have completed the necessary activities and outputs, so that the staff can assign the passing grade.

In their junior and senior years, students enroll in three for-credit courses. The first, Career and Professional Development, is a one-hour, pass/fail course taught by adjunct instructors. The actual internships, Internship I and Internship II, are both three-hour, graded courses, taught by regular COB instructors.

The internship courses are designed to have a substantial academic component. In fact 70 percent of the course grade is based on academic assignments while only 30 percent comes from the employer's evaluations. Involved faculty members have carefully developed the learning objectives, where we

believe students should be able to accomplish the following four items. First, they should be able to identify, integrate, and apply technical business content and knowledge from their own majors and other business disciplines to their job situation; students should be able to demonstrate skills in communications (especially written), and problem-solving. Second, they should be able to demonstrate skills in communications (especially written), and problem-solving. Third, they should be able to demonstrate awareness and understanding of global issues and business. Finally, students should be able to articulate how their work experience has enhanced their professional, academic, and personal growth, as well as their career development.

For each course, assignments are designed which allow students to demonstrate their achievement of the learning objectives. Instructors meet with students several times through the semester, with the objectives of the meetings being to discuss internship experiences and to provide further structure to students about the three to four assignments.

We believe that students, through the activities, events, and courses outlined above, obtain a better business and liberal arts education, and become better prepared for their business careers. As evidence, we show that since 1988, both Butler as well as the COB has attracted local, regional, and national attention in many respects: the COB obtained initial AACSB accreditation in 1997, has been recognized in national business program rankings, and of course the extraordinary run of the men's basketball team, culminating in back to back appearances in the final game of the NCAA Men's Basketball Tournament (2010 and 2011). For example, the Butler COB has achieved high rankings in both the *U.S. News & World Report* and the Bloomberg*BusinessWeek*. Applications and enrollment in Butler's COB have increased over the past few years, in the face of decreases across the nation, with near record freshman classes in both 2011 and 2012.

ASSESSMENT

Huba and Freed (2000) present a brief history of assessment in higher education. Although the assessment of student learning has a long history, it wasn't until 1989 that the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools began requiring student learning assessment. Subsequently, specialized accrediting bodies in areas such as the arts, engineering, sciences, and business began including assessment as part of program evaluation. In fact, AACSB International, one of the primary accrediting bodies for business schools, revised its standards in its 2012 handbook for accreditation, *Eligibility Procedures and Accreditation Standards for Business Accreditation*. In Martell (2007), we learn that the AACSB requires schools to develop student learning objectives, monitor student learning outcomes, and then "close the loop" by using data to make programmatic changes to achieve continuous improvement in their business programs.

In 1992, the American Association for Higher Education Assessment Forum published its Nine Principles of Good Practice for Assessing Student Learning (1992). We learn that we should be concerned not only what students learn at a particular time in a particular course, but also what they can do with what they know through later performance. The hallmark of a good assessment program is that we assess the effect of the program on student learning, rather than their learning in one course. In other words, we should assess what students have learned, how they have integrated that learning, and finally what they can do with what they learned. Finally, another aspect of learning emphasized in the AACSB Standards relate to the fact that business schools should not rely only on passive learning, rather we should incorporate active learning, which has been shown to be more effective, into business programs.

We have made strong use of internship assignments for both learning and assessment purposes, and the Office of Career Development and Student Services makes good use of rubrics and other assessment-related activities to help students become business professionals.

Although assessment and its implications were not foremost in the introduction of internships and a business professional component into the program in the 1980s, it certainly has helped strengthen our business education. First, we use active and experiential learning through the internships to help student learn about business and more importantly, to integrate and apply what they have learned in real business situations: in other words, use what they have learned and show what they can do. Second, the internships provide many points in the senior year for assessment, thus allowing us to assess what students know and can do in a real business setting, rather than what they have learned in one course. Finally, the Office staff use the notion of standardized, consistent assignment requirements and rubrics to help students in their career management. For example, all career mentors and internship coordinators use a standard rubric to help students develop effective resumes and cover letters.

A PATH FOR THE FUTURE

Business schools need to form partnerships with the business community, so that business education meets the needs of future employers and ensures that students obtain an education. Employers need to keep telling business educators what they need from business school graduates. Such partnerships can incorporate into business education what business school graduates need in terms of preparing them for successful professional careers. Finally, our experience shows that a unit within the business school, a unit that deals directly with and only with students' professional and career development, can be very effective in helping students become successful young business professionals.

CONCLUDING COMMENTS

We believe the program achieves the major goals we have for students through this program: it enhances the cumulative learning over four years; it provides knowledge in a "just in time" manner, as they need it in their development; and it adds "real world" and personal and professional application, which adds relevance and urgency to students' desire to learn. We believe all of this helps us produce students who are better prepared to obtain meaningful internships, which lead to more meaningful jobs after graduation. We believe in the attention to "real life, real business" so we pay attention to students' development as people and professionals, in addition to trying to help them learn the traditional content of business education.

Certain factors greatly enhance the ability of Butler University to implement this program, while such factors might limit other universities' efforts. For example, Butler exists in a major metropolitan area, with well-developed industries and business professions such as health care, insurance, consulting, and manufacturing. Second, because of the relatively small size of the COB, we can devote the resources necessary to helping students and we can also place close to 200 students per year. Third, a Lilly Grant (2005) provided the basis for acquiring the staff necessary to support students' career development activities over their four years.

We plan to extend the work of this paper in two ways. We obviously would like substantiation that the program does indeed produce better business professionals. First, we would have to identify what "better business professionals" means to the business community. We believe building better business professionals includes helping students obtain a firm grounding in business content, as well as excellent skills in thinking, problem-solving, communications, and interpersonal and professional development. However, we would like corroboration of this contention. Second, we would like to gather evidence that our students do meet the definition of "better business professionals." We would like to corroborate information by gathering it from employers, graduates, parents, and other constituents.

In summary, we believe that intertwining internships, professional development, mentoring, and workshops with academic learning gives students the crucial links they need to be prepared for successful

careers. Let us end with the national rankings the COB has achieved, as reported by the Butler website (2012): Bloomsberg*BusinessWeek* ranking listed Butler 63rd in 2010, 58th in 2011, and 48th in 2012, out of 124 business schools. The 2012 ranking is ahead of Indiana University and Purdue University. Butler ranks 2nd in internships, and obtained an A+ grade for job placement, which is 99 percent of graduates placed within six months of graduation. In addition, Butler COB ranked 2nd in regional Midwest universities by the *U.S. News & World Report*. To conclude, we believe these accomplishments rest on the foundation built in the mid-1980s by a very visionary, forward-looking dean.

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TRANSNATIONAL EDUCATION: AN AUSTRALIAN APPROACH TO ASSURING QUALITY AND ENGAGING OFFSHORE STAFF

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ABSTRACT

Traditionally and despite the growth and increased importance of transnational education (TNE) staff development and induction in offshore locations are undertaken from afar with sporadic actual engagement. As a long time TNE provider, in an often complex environment, the Curtin Business School (CBS) at Curtin University, in Perth, Western Australia has developed and is implementing a multi-faceted approach to the induction of offshore staff. The article reflects on the context, roll-out and results of a newly developed residential staff induction program. The program facilitated skill development and understanding but more importantly established an unanticipated depth of connectedness and commitment.

JEL: I23, M16

KEYWORDS: Multinational Education; Offshore Staff; Quality Assurance

INTRODUCTION

In the current climate of continuous assessment of a range of quality assurance assessments, most prominently in the Australian tertiary education environment the Tertiary Education Quality and Standards Agency (TEQSA) and AACSB, Australian education providers have little choice but to put measures in place that provide evidence of quality assurance measures on all fronts. This requires that the matter of staff at offshore locations being well versed and trained to achieve equivalence of delivery, governance and service must be addressed.

While the delivery of Australian education in offshore locations has grown exponentially from about 12560 students in 1996 to about 73000 students in 2004, the number of courses offered has grown from 441 programs to 1569 programs over the same period of time (Chapman and Pyvis. 2006). In 2004 all Australian public universities had an established presence in an offshore location (National Tertiary Education Union, 2004). Although the notion of international education has been gaining research attention over the past twenty or so years, little research has been undertaken on the delivery of education in an offshore location and the subsequent impact on quality assurance and delivery standards. The focus of this paper is to reflect on the intended and unintended consequences of an initiative aimed at assisting to quality assure the transnational education (TNE) activities of the Curtin Business School. As part of efforts to enhance continuous improvements across its TNE locations CBS developed and implemented a new program aimed at bringing targeted staff from each TNE location to the Perth campus for an intensive and comprehensive residential induction program. The paper starts by providing a concise context of TNE before moving to aspects of staffing and reputation and the Australian and subject environment. While the data and methodology section explains the rationale and participants to the study the discussion considers immediate feedback, strengths, improvements and the long term assessment. The paper ends with concluding comments.

LITERATURE REVIEW

TNE – Context and Trends

TNE has historically followed a clearly identifiable route whereby students flow from a range of middle income developing countries, mostly in the Asian region, into a small number of predominantly Anglophone industrialised nations. As demand for English based education outstrips supply, tertiary education providers in English language countries have exploited the situation, particularly through the financial premium it commands. McBurnie and Ziguras (2007) establish that this is particularly the case in Hong Kong, Singapore and Kuala Lumpur and in recent days also China. In Hong Kong and Singapore a range of Western universities have established a strong presence through partnering or branch campus arrangements. At the supply side the market is dominated by the United Kingdom, Australia and the United States whose competitive position in the TNE market is strengthened by the potential of migration options and the overall attraction of society. In some instances the countries that initially sent students abroad have now evolved as providers of Anglo-education as TNE education providers have shifted their presence (Altbach, 2003). More recently TNE has evolved and includes a range of other countries such as Vietnam, India and Sri Lanka at the demand side and Canada at the supply side.

McBurnie and Ziguras (2007) content that the development of TNE can be classified into four stages: The first stage would see counties with an outward orientation send student abroad to address the excess local demand for public tertiary education. This was evident in Singapore and Hong Kong in the 1980's and more recently for China and Vietnam in the early 2000's. In the second stage local providers take initiative to enter the private education market in partnership with a reputed foreign institution to provide an affordable alternative for international education and curb outward student flows. Private colleges in Singapore and Malaysia established in the 1990's and offering Australian or United Kingdom tertiary education reflect this stage. During the third stage the domestic market matures through an increased focus on quality and competition and shakes out sub-par providers across the sector. The presence of and association with an international TNE provider translates in an opportunity for capacity development and a source of income alongside the availability of affordable expertise (Lee, 2003).The fourth and final stage sees the emergence of an education export capacity by attracting foreign students from other (often neighboring) developing countries. The establishment of a number of Australian university campuses in Malaysia is indicative of this stage.

Since various countries are in different stages of participating in the TNE process, there remains a significant amount of opportunity for TNE providers to expand. Expansion is naturally subject to opportunities and limitations, both internal and external to the institution.

TNE Drivers

Tertiary education in general and the TNE education sector in particular has gradually taken on the characteristics of a commodity subject to purchasing laws with universities as producers and students as consumers. The industry is characterised by high levels of competitiveness through high pricing and brand exposure (Stephenson, 2006). The export side of the TNE industry is further fuelled by ongoing funding restrictions and reductions in most developed markets such as Australia and the United Kingdom. The export nature of the Australian TNE is evidenced through a Monash University campus in South Africa, a Curtin University campus in Malaysia and a RMIT campus in Vietnam. According to Meares (2003) universities tend to see a transnational presence in the light of expansion and as a means to compensate for the financial shortfall resulting from funding restrictions. In addition, the presence assists greatly in brand building and profiling the institution. Similarly, Hackett (2001) argues that the key motivation for providing offshore programs was initially to generate income and subsequently to achieve internationalization and build a solid international profile. MacDonald (2006) agrees that offshore

campuses hold enormous potential for promotion while realistically presenting a quality assurance risk with direct links to the brand of the university. Indeed, Smith (2010) labels the establishment of a branch campus as 'risky business'. The global commercialization of the education industry, and particularly in a TNE context, explains why recruitment of international students, both onshore and offshore, is predominantly seen as an income generating exercise. According to Stephenson (2006) initiatives to tap into the ever lucrative TNE market drive growth and competitiveness and result in a sector predominantly driven by commercial drivers.

Education providers are required to both manage their transnational presence but also to understand what students' value and expect from the education experience. In researching the decision making process of international students Cubillo, Sanchez and Cervino (2006) determined that two of the five decision making factors are directly managed by or related to the institution. These are the perceived quality of the program and the image of the university. Despite the actual or relative importance of these factors not being determined it appears that universities playing in the TNE sphere would derive value from building and protecting both program and institutional images to understand and maintain a competitive position in the industry.

McBurnie and Ziguras (2007) label quality expectations as crucial in that it is one of the prime facets impacting on student choice of education provider while remaining the most prominent challenge in TNE regulations and controls. In addition, the success of an international program and its ongoing presence is dependent on the quality of the overall TNE experience of the student. Quality content delivery is paramount in ensuring that the educational value of the TNE delivery is on par with its domestic equivalent. The development and maintenance of a quality TNE program therefore pivots on the ability to attract retain and develop highly qualified staff at the offshore locations (MacDonald, 2006). Similarly, the quality assessment of a program is a function of the quality of students as reflected in, inter alia, the equivalence of entry requirements. In essence Desoff (2006) argues that the delivery of a TNE program is likely to be successful and attract students as long as the international education exercise provides an opportunity for learning and development. Overall though, the quality of TNE is captured in both administrative or non-academic and academic aspects of interaction and service delivery.

The establishment of a competitive advantage or edge in the highly competitive TNE environment can be achieved through both external positions and associations of the institution or internal competencies. Mazzarol (1997) postulates that successful institutions in a TNE environment use their alumni to enhance their reputation and image as quality provider.

In the highly competitive international education environment a competitive advantage can be established on the back of both internal competencies and external perceived positions and associations from the institution. Successful institutions traditionally enhance their image and reputation as quality service providers through their alumni (Mazzarol, 1997). As an example of the importance of external association institutions in the United Kingdom are aiming to retain a leading position as international education provider through the national pursuit of a framework for postgraduate research (O'Malley, 2009).

Reputation and Staff

The reputation of a provider is recognised as instrumental to the success of any branding and marketing exercise in the services industry (Yoon, Guffey and Kijewski, 1993). Reputation is argued to reflect and carry valuable information about the capability and level of the service in the context of the industry and other competitors. Its mere existence allows companies to not only indirectly interact with potential customers but on a more subtle base to influence the buyer intentions. In the TNE context of learning settings, this translates into institutions marketing methods signalling high entry level requirement and

premium prices as a means to attaining a superior reputation for service delivery (Fombrun and Shanley, 1990).

In the modern TNE environment academic reputation is increasingly captured in a range of rankings and accreditation exercises in which institutions participate. These tend to reflect a critical assessment of academic measures, administrative and other support activities. According to Gardner (1998) the reflection of service quality as experienced and expressed by students, forms a core component of an effective assessment of quality. Findings by Ben-Ami (2005) indicate that almost a third of tertiary enrolled students are dissatisfied with their experience and reported expectations not being met, which leaves room for improvement for universities in enhancing the level of service delivery in the first instance and arguably their reputation in the longer term. Cloete and Bunning (2005) posit that the efficiency of a university is best served by a high percentage of highly qualified staff, arguably implying quality. This is echoed by Ben-Ami (2005) confirming the importance of highly skilled and qualified staff to deliver programs. Tait, Van Eeden and Tait (2002) furthermore established that the level of satisfaction and value of learning by students is significantly correlated to the actual interaction of lecturers during classes. In essence the quality of lecturing staff is crucial to the student experience and indirectly to the university experience and reputation. In the context of TNE delivery of content this highlights the importance of induction and ongoing training to ensure equivalent quality across locations.

Australian Providers

Australia is not only a pioneer of providing international education, initially through the Colombo plan, but has strengthened and maintained a leading provider role alongside the United Kingdom and the United States. Australian tertiary education claims characteristics such as, a truly international experience; innovation in research; research and scholarly associations; superior academic staff; an international reputation and a worldwide respect (IDP, n.d.). A distinct advantage in both attracting foreign students onshore and facilitating the delivery of courses in Asia is its geographic location at the Southeast Asian rim. The three primary reasons listed by international students studying an Australian qualification are quality, reputation and employability (Universities Australia, 2007). Its persistence and commitment to provide a quality educational experience is reported as being an underlying factor contributing to Australia's ability to remain at the forefront of internationalization. This is confirmed by Pimpa (2008) in a study of decision making drivers of Southeast Asian students studying as Australian institutions, reporting a belief and perception that studying at a prestigious institution enhances the individuals' social standing and respect. These parameters and principles are argued to be relevant to the delivery of Australian university education in a TNE environment.

The provision of international education is important to the Australian government as it is a major export industry. In view of this, the government has taken steps to strengthen and protect 'brand Australia', predominantly through regulating the sector. The first step in this direction was the establishment of Australian Universities Quality Auditor (AUQA) in 2000 and its subsequent transformation into the Tertiary Education Quality and Standards Agency (TEQSA) in 2011 (Tertiary Education Quality Assurance 2011). The TEQSA brief as a natural expansion of quality assurances on a national scale is to ensure that the reputation and quality of the Australian higher education sector is protected into the future. This brief is based on the government position that Australia cannot risk its international quality reputation to be exposed to inferior service providers (Gillard, 2009). The Australian government is conscious of the increasingly competitive marketplace and need to ensure quality delivery of its TNE providers.

TNE and the Curtin Business School

The Curtin Business School mostly through personal contacts, opportunities and an entrepreneurial spirit became a pioneer of providing education in offshore locations as early as the 1980's. In retrospect the relationships in the Southeast Asian region and their subsequent importance has complemented the relative opportunistic approach over time and resulted in almost three decades of successful business associations. At the start of providing international education CBS provided in country education complemented by local lectures, through private providers, mostly professional bodies, in Singapore, Hong Kong and Malaysia. Over time, and as the TNE sector expanded, CBS adopted a range of delivery models to enter new markets such as Mauritius, Sri Lanka, Pakistan and Vietnam.

As the TNE industry matured and in response to an increasingly regulated and monitored environment it became clear that some ventures did not have long term viability. As part of an externally driven quality assurance exercise CBS made the decision to disengage from a number of TNE engagements by the mid 2000's. In retrospect and with the embedded international focus of the 2008 AUQA (Curtin University of Technology, 2008) audit the discontinuation of these weaker programs, on multiple grounds, proved to be timely and appropriate. By 2009 the CBS offshore presence included the three joint venture type university branch campuses in Miri, Singapore and Sydney as well as substantial ongoing offerings through private providers in Hong Kong, Mauritius, Kuala Lumpur and Penang.

The implications of alliance type arrangements in TNE included sharing external risks and uncertainties, accessing distinct capabilities, enhancing reputation, capturing cross-business synergies in pursuing customer value and attaining increased productivity and economies of scale through skill development (Dickie and Dickie, 2008). In the context of the to date 'command and control' approach of CBS and despite a favorable AUQA report the pursuit of continuous improvements led to initiatives to further support and integrate activities in the TNE environment. The notion of a higher level of engagement and commitment towards TNE resulted in initiatives and structural changes aimed at improving quality assurance and reputation.

Based on a parent university perspective, the proper induction of academic staff in TNE locations is core to both the quality and equivalence of teaching and learning (MacDonald, 2006). The induction should aim to cover both aspects of policy and practice to assist local academic staff in developing the required understanding and skills to both teach appropriately and guide students in studying an Australian university course. In this context CBS appointed an Academic Director as part of its TNE team to oversee and quality assure the delivery of CBS courses in its various locations. The underlying intent of engagement and induction initiatives was to invest in capacity development at its TNE locations. This capacity building approach is deemed to allow the partnership to move beyond mere financial sustainability and identify clear objectives for progression and clarify expectations (Dickie and Dickie, 2008).

DATA AND METHODOLOGY

The increased focus on quality assurance, accreditation expectations and ambitions, teaching and learning outcomes, refocused academic roles, and alignment of policies, practices and procedures, both in the TNE sector and internally in the university, resulted in the development of a pilot induction program (PIP) targeted at the TNE activities of CBS. The program aimed in the first instance to address a wide range of these requirements by bringing together senior staff of the various TNE locations, while also serving as a 'train the trainer' exercise. The program was aimed to address needs of both academic staff at the various TNE locations and those of the institution aimed at providing quality assurances in the academic and policy and procedures spheres. The program was offered over a seven day period in March 2010. The program tapped into a wide range of resources and delivered the targeted outcomes of strategic and

operational value but also unanticipated outcomes of association, commitment and personalised integration of the participating staff.

Rationale and Structure

At the outset of the program development the primary aim was to provide a number of interactive staff development sessions, clarify information, expose staff of the various locations to the 'whole of CBS' presence and equip them to repeat the program at their local campus, effectively along the lines of the 'train the trainer' principle. The targeted group was senior academics, mostly determined by the role and likely influence at their local campus. This was envisaged to both recognise the pivotal role of the staff while aimed to ensure some authority when the program was repeated at the local campus. The over-arching purpose of the PIP included to advance a common experience and understanding of CBS and its operations, the university policies, procedures and practices and to create a network of champions across the various locations. The undercurrent of equivalence in delivery, student experience and the overall quality assurance was woven through all activities and interactions.

The program itself consisted of a mix of networking opportunities, some social in nature; administrative policy and procedures; and more academic colored teaching and learning perspectives, all set in an interactive, consultative climate. The PIP included topics as reflected in Table 1.

Table 1: PIP Program Content

National accreditations (AUQA, ESOS, TEQSA)	**Blackboard**
Accreditation (AACSB, Equis)	What is blended learning
Students and staff codes of conduct	English language support
Interaction with academic and professional staff	Assessment
Admission, credit transfers, curriculum mapping and the appeals process	How to encourage students to participate in class
Online Academic Student Information System	Plagiarism and reporting
Library resources	Using Turnitin
Using technology and computer-based materials	Moderation process and reporting structure
CBS Communication Skills Centre services	Strategies for effective teaching and learning
Learning styles	Observations of a tutorial
Observations of a lecture	

This table lists the range of activities and topics that made up the PIP. The list confirms a wide variety of topics including regulatory requirements; policies, procedures and processes; support mechanisms; and teaching and learning principles and practices.

To counteract the risk of information overload and in order to create a more personalised and engaging program the PIP was consciously developed to include a weekend in Perth. This facilitated not only a number of opportunities for social interaction and sigh seeing – translating in a different layer of appreciation for the main campus, but also allowed a personal exposure to the city, and Australia in a stress free environment. It was remarkable to note that all participants, including the two Perth based participants participated in all social events, translating in a very cohesive group during the program and a strong connectedness and high level of engagement throughout the program offerings. The collegiality that emerged from this contributed to a lasting network well past the programs timeline as reported later.

RESULTS AND DISCUSSION

Participants

In order to ensure participation by all TNE locations CBS and the university funded one participant from each TNE location, including transport and on ground expenses. All TNE partner locations were invited to nominate and self-fund a second participant, an option that was taken up by Hong Kong and Penang, Malaysia partner locations. The Sydney branch campus also proposed two candidates to attend the

program but this did not eventuate due to unforeseen circumstances. In an announcement to executive management of all TNE arrangements, an invitation was extended to nominate senior staff, preferably academic, to attend the program. The staff was expected to be solely or predominantly committed to the CBS program and deemed most appropriate to execute the expectation to repeat the program to colleagues at the TNE location.

Table 2: Distribution of Program Participants

LOCATION	PARTICIPANT SENIORITY	PARTICIPANT ROLE
Mauritius	Senior Academic	Purely academic
Hong Kong	Two Senior administrators	Predominantly administrative
Singapore	Senior administrative manager	Purely administrative
Kuala Lumpur	Campus Director	Academic and administrative
Penang	Two Course Directors	Academic and administrative
Sarawak	Dean of Teaching and Learning	Predominantly academic
Sydney	Academic Director	Predominantly academic
Perth	Two Course Directors	Academic and administrative

This table lists the characteristics of the PIP program participants. While panel A shows the geographic location of the participants, panel B shows both the focus of the role and the number of participants. Panel C shows the composition of the role of the participant at the offshore location.

As a number of staff across TNE locations undertake both academic and administrative roles most the participants covered both spectrums. All locations nominated senior staff and nominations overlapped with initial intentions held by the organizing committee. Due to the nature of staffing, those locations that employ academic staff on an ongoing basis were able to nominate those while others that rely on fractional academic staff elected to send senior administrators that would undertake the induction of the academic staff. The participants were deemed to be the most appropriate target group to reach the larger amount of academics delivering the programs in the various TNE locations. In all eleven (11) staff participated with the following characteristics:

At the conclusion of the program and in recognition for their participation, the Deputy Vice Chancellor Academic participated in a social function where certificates of attendance were issued to all participants.

Throughout the development of the PIP the desire for continuous improvement and the intention to establish this as an ongoing capacity development was kept in mind. In view of this the collection of feedback was integrated in the roll-out of the program.

Immediate Evaluation

In order to determine the actual value of the program to participants and in order to establish the future viability of the program a program evaluation was included in the wrap up session of the program on the last day. The evaluation included both qualitative and quantitative data. Table 2 below provides an overview of the quantitative data collected at the conclusion of the program. This is followed by a summary of responses to open-ended questions, seeking to ascertain the benefits and suggestions for subsequent programs.

The most notable aspect of Table 3 is that participants expressed high levels of satisfaction with the program approach and reported significant learning. All participants supported the notion of the program being repeated in the future.

Despite a significant amount of content and most likely due to the participatory and collaborative approach of the program the participants identify the main benefits of the program to be relationship and people based. Responses pointed in particular to ‘being heard’ and ‘networking’ as key strengths of the

program. Suggestions for improvements failed to point to program content or delivery but focussed on peripherals such as starting times, breaks and accommodation arrangements.

Table 3: Participant Evaluation

General Overview of Program	1 Strongly disagree	2 Disagree	3 Unsure	4 Agree	5 Strongly Agree
I found the OSIO program useful?				2	9
I think that what I learned from this program will be helpful in my work at my home campus?				3	8
I think that what I learned from this program will be helpful to my colleagues at my home campus?				4	7
The material and handouts were useful?				4	7
I would recommend this program be offered again at the Bentley campus in Perth?				1	10
I would recommend a staff development program be offered at my home campus?		2	1	3	5

This table shows the participant evaluation of the PIP program based on a 5 point Likert scale assessment of a number of questions asked about the program. Questions prompted participants to reflect on the overall usefulness of the program, their learning, the program material and their attitude towards recommending the program. The number in the columns represents the amount of respondents nominating that response.

In essence the personal understanding and engagement in working out how and why the university and CBS operate in a certain manner resulted in an unanticipated level of ownership by all participants. The added bonus of engaging with like-minded people from similar backgrounds in other TNE locations translated in a state of belonging and acceptance.

Strengths: Networking, Belonging, Being Heard and Clarifications

An assessment of the qualitative open ended feedback gathered at the end of the PIP indicated an overall reflection that the networking with colleagues from Curtin University and CBS staff was deemed as one of the most prominent benefits of the program. Respondents confirmed that the opportunity to meet staff in a face to face environment after often having communicated and interacted extensively was extremely beneficial. Confirming this are answers to the question to point out the best aspect of the PIP that drew replies in relation to the best aspects of the program along the lines of … *meeting people with whom we have been working closely;* and .. *sharing session with the teaching staff;* and *...networking and the opportunity to provide feedback.*

Importantly though, the perceived benefit of the interaction and networking includes the newly found network of colleagues from other locations. The value of this was in a shared understanding and experience translating in a recognition and membership as being part of the CBS TNE operations. Comments on the question to identify the benefits of the program included aspects of … s*haring and comparing notes with other colleagues and finding out better ways to do things;* and *... networking with other campuses and partner;* and *... meeting with Curtin delegates enhanced relationship and probably can facilitate working effectiveness in the near future*

At the start of the PIP participants expressed some sense of frustration and isolation, mostly related to not understanding or not being understood. The sense of isolation also contributed to perceptions and misinterpretations of the implementation of policies and procedures, and expectations of interaction with the main campus. The PIP allowed all participants to clearly understand where and how they individually and collectively fit in the CBS TNE operations. The result of the contextualization exercise, alongside the interaction with colleagues from other locations translated in a sense of belonging and acceptance of each other. This, in turn, contributed to a strong sense of identity, as expressed by one participant as … *I feel as being part of 'Curtin Global'.*

A second theme that emerged from the post program feedback referred to the opportunity to put the case of the offshore location on the agenda. Due to the limited opportunities for interaction and the virtual absence of face to face interaction the value of being a contributor and participant in a forum of equals was significant for participants. In most instances these discussions highlighted the reality that difficulties and problems experienced at one location also exist at most other locations and levelled the frustrations often associated with managing these matters with the main campus. The mere opportunity to be heard was described as valuable, as was the notion of a willingness at the CBS to learn from the PIP as reflected in the comment that … *each location/country may have different needs which CBS may not be aware of.*

A large amount of value was seemingly extracted through the mode of the PIP delivery, enabling content to be enhanced and explained in an interactive and participative way. The mere opportunity to engage with colleagues, either those with whom relationships were already in place or those with whom shared perspectives and experiences became clear throughout the PIP assisted in a more accurate understanding of the realities and position of the TNE staff and contributed to a significant shift in mindset for all participants.

Another trend identified from the PIP immediate feedback is the value of engaging with policy makers and enforcers. Participants generally indicated being detached from policies and procedures as the meaning and intent are often difficult to ascertain and understand from a distance – geographical, language and educational context wise. The opportunity to engage up-close with staff and material in a focussed environment not only allowed a clearer understanding but also contributed to an acceptance and support of the matters at hand. In essence most participants joined the programs with underlying tones of being at opposite sides of the TNE delivery and gradually transitioned to subscribe to represent CBS in their respective locations. Comments like … *the program gives a better understanding of the happenings at CBS and CBSi;* and … *open communication, understanding of the direction in which CBSi is headed, & discussion of various issues with all partners* reflect this perspective best.

An insight into the way that academic staff on the main campus interacts with students and material was also pointed out as a strength. The Australian delivery mode of mass lectures and tutorials is often not in place at TNE locations simply due to the smaller class sizes. Participants indicated that the insight provided into the practical delivery of a lecture and tutorial was an eye opener to them and of particular value. As one participant put it … *the class visit of Business Law 100 was enlightening.*

Throughout the program a number of workshops were highlighted for their value to individual participants. Commendations were made for the workshops explaining the library access, accreditation processes and implications and the teaching and learning sessions.

Improvements

The responses on possible program improvements for the future delivered an unanticipated angle. Some dissatisfaction was expressed with the accommodation with participants suggesting accommodation closer to campus. Although the campus is located in a suburban area and accommodation is not available nearby the time spent in traffic to and from the campus has most likely frustrated participants, most of whom are either used to highly efficient public transport or uncongested roads.

The scheduling of the seven day program also attracted some constructive feedback. The program was a full time residential program with a high intensity. In an attempt to expose participants to a significant volume and variety of content it is likely that the full days and the vast volume of information on the back of mostly tight travel schedules contributed to the experience. The organizing committee noted the suggestion and would take this into consideration for any future planning.

Under the recommendations for improvements, another suggestion was noted, namely the limited focus on teaching and learning. This feedback was likely a result of pre-program expectations from some participants combined with the strong focus on engaging and preparing students for an Australian education experiences. Overall none of the criticisms were substantial, nor do they pose an obstacle to being addressed in future versions of the program. Overall the challenge of any program will remain to strike a balance between the vast volume of content and the opportunity to engage and reap personal and institutional benefits from the induction program.

Reflection

As part of the immediate feedback and in line with the consultative approach to the PIP participants were asked to provide an indication of general comments and perspectives on the program aimed at any future versions of the program. While there was little overlap in suggestions forthcoming from this question some valuable topics that are tabled include the development of collaborative research, a TNE mentoring system, extended opportunity to further enhance existing relationships and targeted sessions to introduce university and CBS staff to participants.

In reflection of the PIP some generic comments reflect the experience by participants. In general, the sentiments of the value of the program are best captured through the feedback by participants that includes … *it has been a great week and it was so informative;* and … *very well organised program, would suggest that it becomes a regular/yearly event;* and … *thank you for initiating this developmental program. It has been very useful and informative.*

In an attempt to get a concise summary of the value of the program participants were also requested to describe what the program had meant to them in a single sentence. Not surprizingly the notion of networking, learning, being heard and belonging resurfaces in this section. The following quotes best summarise the single sentence feedback: *The program has bridged different ideas and brought everyone to the same understanding, it has helped to align our understanding of Curtin's values and how they work here;* and … *Informative and generates greater understanding and awareness about CBS and partner institutions;* and … *The program enabled me to discover Curtin (the campus and the people) as well as meet and discuss with people from other locations;* and finally … *It has been very informative and I am glad that I feel I am part of Curtin-CBS.*

Long Term Evaluation

In addition to the collection of data upon completion of the program as reported above the program organisers requested further feedback and reflection on the value of the program more than 9 months after the program. The reasoning for the collection of feedback was to establish if the feel-good nature of the experience and its actual value for the various TNE locations persisted over time. The feedback session was also aimed at establishing if the train the trainer exercise had delivered the intended outcome of spreading the information and content of the PIP program to a wider audience of academic staff in the different locations.

It was interesting to note that the initial value of face-to-face interaction and engagement had subsided significantly and the focus of the feedback was squarely on the value of the PIP content. This was reassuring for the program in that the ultimate aim was to ensure that quality assurance measures, systems and procedures were understood and embraced in the various TNE locations. Participants were asked to notify the value of the program and indicate to what extent the program had contributed to the learning experience of staff and students at the respective locations. Participants were also invited to share challenges and successes in implementing some of the learning's from the PIP program at their locations.

Despite the reflection of the actual PIP being a unique and enjoyable experience, overall the responses indicated a strong task focus. Positives reported as being implemented included the pursuit of more focussed and better quality feedback through the moderation process so as to ensure continuous improvement and better alignment of assessment. Along a similar line, staff in most TNE locations had embraced a change to electronic marking with curiosity and eagerness. Most frustration expressed by participants was associated with the compulsory use of a range of software that continued to cause technical difficulties. It remains unclear if this is a result of training or differences in information technology systems and capacity at the different locations.

An associated change in behavior was the uptake by students of the blended learning resources made available directly from the main campus through podcasts or i-lectures. This trend is encouraging in efforts to implement a blended learning model and has significant value in quality assurance efforts, particularly when focussing on the content of delivery and albeit passive engagement with the CBS academic staff member. The value was reported by one participant as … *the teaching faculty from Curtin provided us a refreshing look at how to improve our lecture delivery which I shared during my staff meeting.*

The dominant trend of networking related comments in the post induction feedback were subtly present as participants reported a significant improvement of operational interaction and being able to resolve matters. Core to this, according to the participants, was the knowledge of who to contact for a specific matter and the familiarity with the person derived from the actual face to face PIP interaction. The impact was labelled as significant to the extent that two participants claimed that their participation in PIP had a direct bearing on gaining national accreditation as it validated the role and association of the local operations back to the university.

CONCLUDING COMMENTS

This paper reflects on the outcomes of a newly developed program in the context of ongoing quality assurance changes in the Australian TNE environment. Data was collected from all participants in a newly established induction program aimed specifically at senior and experienced staff from the complete range of offshore locations where business programs are offered. Data collection took place in two stages – first immediately after and secondly 9 months after the conclusion of the program. A thematic analysis was undertaken to determine the value and contribution of the program to quality assurance of the offshore delivery of academic programs and university presence.

Upon analysis it is clear that the PIP program holds significant value through its content but, remarkably, an equally important value in the delivery mode and approach to the program. Despite initial intentions to develop a program aimed at assisting to ensure quality assurance at a faculty level and indirectly at the university level, the program has delivered a significant amount of unintended benefits. The interaction and engagement of the participants on the main campus, as peers in a residential forum not only validated their association but impacted positively on the working culture between the main campus and the different TNE locations. The newly found identity and belonging of participants has transformed them into CBS agents on their respective campuses who continue to facilitate interactions.

Although the paper reports on the experience of a targeted induction initiative of a relatively active Australian Business faculty the underlying limitation rests with the sample size of the respondents having limited representation at both the university level or for that matter for other education providers. In addition, the data set and therefore analysis is basic in nature and does not allow for a more rigorous interpretation of responses and experiences.

Nevertheless, the PIP proves to be an ideal tool to enhance ongoing efforts to develop capacity and align course material, delivery and teaching and learning approaches across the various TNE locations. CBS has decided to repeat the program biannually to ensure that its TNE offerings are kept engaged while pursuing the continuous improvement in its quality assurance activities. Yoon, Guffey and Kijewski (1993) confirm that a reputable and best practice provider in TNE has little choice but to establish and protect its reputation, through quality assurance measures that allows it to meet accreditation and auditing requirements.

This opens the door for possible future research, analysis and reflection of both ways and means in which universities, Australian and other, actively playing in the TNE environment can leverage their reputation and presence in offshore markets. With increasing pressures in the global TNE industry universities will benefit from stronger association with staff in the various locations to enable them to ensure the delivery of quality education in those locations but also to assist their product and services to be of the standard and nature as the university expects. Ultimately this reassurance will allow successful institutions to strengthen their position in the TNE environment and survive the increasingly competitive climate.

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GRADUATION RATES AT U.S. COLLEGES AND UNIVERSITIES: A LARGE DATA SET ANALYSIS

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ABSTRACT

This paper compiles data from a half a dozen different sources to examine the relative impact various factors have on graduation rates. Research finds that faculty salaries positively impact rates, public schools have lower graduation rates and liberal arts colleges, research and masters' universities have higher rates than comprehensive. Overall, the existence of learning communities and teaching centers at institutions of higher learning does not improve graduation rates. However, if the type of school is taken into consideration; the existence of learning communities does improve graduation rates at comprehensive universities but does not have any impact on research and masters universities or liberal arts colleges. This research suggests that when implementing programs aimed at improving graduation rates different types of colleges and universities need to be selective in what they choose.

JEL: A20, A22, Z18

KEYWORDS: Graduation Rates, Colleges, Universities

INTRODUCTION

Concerns about the cost of college, the lack of students entering the science, technology, engineering and mathematics (STEM) fields and growing debt among students appears in the news daily. At, or near, the top of the problems facing higher education is the number of students who do not finish college. Noting that 44 percent of entering students do not graduate from college, Bowen (2009) is one of many who argues that the United States will lose its competitive advantage in the world if this is not addressed. In 2011, the Obama administration set up a system of grants for states to help them improve college graduation rates. The goal is to have the U.S. have the highest college completion rates in the world by 2020 (Lewin, 2011). Entering first year students are more diverse, with a higher number of Hispanic, black, part-time, older, low income and other minorities entering college. Yet, the graduation rate for these populations lags behind more well-to-do white population. (CHE, 2011-12). While improving graduation rates may be a priority for the government and other stakeholders, it has not improved significantly over the past few decades.

There has been an enormous amount of research aimed at explaining and trying to improve graduation rates at U.S. colleges and universities. Some of it has been on developing theories of student retention and how successful particular programs colleges implement are. Other research has focused on specific students such as athletes and how the implementation of a new program may improve graduation rates (*College Student Retention, 2005*). This research adds to the body of literature by examining graduation rates from a broader perspective. Instead of looking at a particular college, small group of students or a certain program, it uses a large data set examining close to 1,000 different schools. It then isolates the impact of variables, such as faculty salaries, learning communities and other factors that influence graduation rates to examine their marginal impact.

On the following pages a review of some of the literature on the subject is covered. Then a description of the data is provided, citing the different sources. The methodology used and the results from the econometrics is discussed. Different variables likely have more or less influence on graduation rates at different types of schools. For example, a learning community may improve graduation rates at larger

research universities than at smaller liberal arts colleges. Thus, this research addresses the interaction of combinations of variables on graduation rates. The conclusion with recommendations for future research completes this paper.

LITERATURE REVIEW

Research pertaining to graduation rates at U.S. colleges and universities covers a broad spectrum of topics. A substantial amount of literature explores programs and policies that schools have implemented or could pursue that increases retention rates. Institutions have developed many orientation programs for first year students attempting to increase engagement and commitment with the ultimate goal of improving graduation rates. In one example of many, Brown (2012) tries to develop a survey at one college for incoming first year students. By administering this test/survey to all incoming students she hopes to identify certain characteristics among the students. Then the data can be analyzed such that different departments in the college can be notified of potential issues that may arise with students to target them with appropriate support to increase their retention.

One area of research inspects the opportunities available at institutions of higher learning, for students who typically struggle, such as the transfer student population or commuter students. Vega and Martinez (2012) look at affordability, access and resources for Latinos in public universities in Texas. They examine a plan put in place by the state government to address the lack of Hispanics graduating from college and then examine public documents. They find that certain areas have higher graduation rates for Hispanic students and that those who stay closer to home are more likely to complete college.

Other research focuses on groups that may be marginalized such as the Lesbian, Gay, Bisexual and Transgender population or have challenges that are not readily apparent like students with some types of learning disabilities. Woosley and Shepler (2011) examine experiences of students who are the first generation in their family to attend college. Based on surveys at one college they find that many of the factors that impact graduation rates of non-first generation college students also impact those of first generation students. The level of academic preparation coming in to college, degree of interpersonal relationships and stress all impact graduation rates; though first generation students are still much less likely to finish college than their counterparts.

Some research looks at the efficacy of privately funded programs aimed towards groups with lower graduation rates. DesJardins and McCall (2006) examine the effectiveness of the Gates Millennium Scholarship Program. They find that the retention of minority students depends in part on their race. However, due to the nature of how students are selected into the program they were not able to better isolate the impact of different variables on retention. Angrist et. al. (2006) studied a small sample of Canadian students, broken into three groups. They found that students using both tutoring services and financial rewards were more likely to return for their second year than students getting only financial or support services. Breaking the group by gender they also determined that the impact was greater on female than on male students.There is also a significant body of research and reports that examines differences in graduation rates at various institutions of higher learning.

The Access and Equity Report in the Chronicle of Higher Education (2011-12, 58:1) is one source. Community Colleges struggle to get many of their students through their programs and on to four year universities. Students attending for-profit colleges finish school at a much lower rate than their non-profit counterparts. Public schools have lower graduation rates than private ones and elite schools have much higher graduation rates than other colleges and universities.The majority of research on the effectiveness of institutions of higher learning uses graduation rates as the main measure of success. However, some researchers have pointed to the limitations of this method. Barefoot (2004) notes that the current method of measuring graduation rates may not accurately reflect the percentage of students who

actually receive degrees. As many as 29 percent of students who have not received their degree from the school in which they first enroll either have graduated from another college or are still in school.

Archibald and Feldman (2008) think that the use of production frontier analysis could also be used to examine the output of universities. They note that a school's graduation rate does not capture all of the value that universities provide such as research activities, service to the local community and the actual value added to students in the classroom. They argue that graduation rates are useful but should be used in the correct context. In part, due to the cuts in funding for higher education, some research examines how Federal or State funding for colleges and universities impacts student retention and completion. Zhang (2009) uses panel data from the Integrated Postsecondary Education Data System (IPEDS) to look at the connection between state increases and decreases for public universities and their six year graduation rates. He finds that the more state funds that are provided to universities do increase graduation rates, but that the impact is small and not necessarily statistically significant over time.

The research in this paper uses a larger data set than any previous research to identify variables that impact graduation rates at colleges and universities across the entire United States. It thus adds to the literature by examining the issue in a macro context as opposed to the micro context of most studies just focusing on one school. It may be useful for broad policy implications.

DATA AND METHODOLOGY

Data on four year colleges and universities were collected from seven different sources. This research does not include two year colleges or for-profit schools. I started with information about graduation rates and a few other variables from the 2009 *U.S. News and World Report*. Since there are many variables that impact graduation rates (such as faculty salary) that are not listed by this source I gathered data from other sources. I also compiled some variables on my own such as the location of the school (urban, suburban or rural) and if it is public or private. In addition, I converted ACT scores to their SAT equivalent in order to include a general standardized test scores in the regressions.

The Carnegie Foundation provided data on the type of school (Liberal Arts, etcetera), the U.S. Department of Education lists whether higher education institutions have learning communities, the American Association of University Professors (AAUP) gives data about faculty salaries. I obtained information if schools participate in the National Survey of Student Engagement (NSSE) from Indiana University and if there is the existence of a teaching and learning center at the college or university from Hofstra University. I compiled the data sources into one large data set. In all cases I gathered data from 2009 so that the variables all coincide. In some situations the data sources were in different formats and in other situations did not have information for all of the colleges and universities. None the less there are close to 1,000 observations available for the regressions estimated. Table 1 gives an overview of the data, describing each variable, listing the source of the data and providing summary statistics.

Inspection of Table 1 provides an interesting overview of higher education institutions in the United States. The average graduation rate for all colleges and universities is just over fifty percent. This corresponds with other studies, though many other researchers tend to just focus on particular categories, such as public only, community colleges or rates in a particular state. Most stakeholders in higher education, including government officials deem this to be too low, hence the research in this paper.

The majority of schools are private, sixty-three percent, and a minority participated in the National Survey of Student Engagement, thirty-three percent. Colleges and universities are located where we would expect, forty-three percent in urban locations, thirty-one percent in suburbia and twenty-six percent in rural areas. Far and away the majority are co-educational, with only three percent all-female and only one school all-male. Over the past decade schools have implemented a variety of programs intended to

increase their graduation rates. Two of the most common and visible are the establishment of teaching centers and learning communities. Teaching (sometimes called teaching and learning) centers are set up to provide professors resources to help them to learn how to be better teachers. When this data was collected there were 256 schools that had a center for teaching.

Students who feel isolated or are homesick are more likely to drop out of college than their counterparts who are not. One recent trend is to have a built in support network for some students. Learning communities group students based on similar interests such as sports, music or other common interests. These are intended to provide a support network for incoming students. As of 2009 there were 243 institutions that implemented some type of learning community for incoming students. The sections below look at factors impacting graduation rates, with the focus on how teaching centers and learning communities contribute to it.

Table 1: Descriptive Statistics

Variable	Description Of Variables	Data Source	Number of Observations	Minimum	Maximum	Mean	Number Reporting Yes To DV
GradRate	Graduation rate at each school	USNews	1336	0.09	0.98	0.515	
FacultySalary	Average faculty salary, in thousands of dollars, not including instructors	AAUP	935	35.46	130.00	69.40	
StandTests	SAT scores and ACT scores converted to SAT scores	Author	1285	605	1520	1071.5	
TeachCenter	If a school has a teaching center (yes =1)	Hofstra	1347	0	1	0.19	256
LearnComm	If a school has learning communities (yes =1)	USDOE	1347	0	1	0.18	243
NSSE	If school participates in the National Survey of Student Engagement	Indiana Univ	1347	0	1	0.33	445
Public	If the school is public (yes=1)	Author	1347	0	11	0.37	499
Peerassmnt	Peer Assessment of the school	USNews	1347	1	5	2.79	
Rankincat	School's rank in its US News category	USNews	686	1	120	40.68	
FreshReten	Freshmen retention rate	USNews	1313	0.22	0.98	0.748	
PerClsUnder20	Percent of classes with fewer than 20 students	USNews	1271	0.14	1.00	0.5503	
PerClsOver50	Percent of classes with more than 50 students	USNews	1272	0.00	7.00	0.4753	
Studentfacultyratio	Student faculty ratio	USNews	1086	3.00	47.00	14.79	
FacultyFT	Percent of faculty that is full time	USNews	1294	0.08	1.00	0.805	
Freshintop25	Percent of entering students who were in the top 25 percent of their high school class	USNews	1155	0.02	7.00	0.438	
Acceptance rate	Acceptance rate	USNews	1321	0.10	1.00	0.701	
Urban	If the school is in an urban location (yes=1)	Author	1347	0	1	0.43	579
Suburban	If the school is in a suburban location (yes=1)	Author	1347	0	1	0.31	418
Rural	If the school is in a rural location (yes=1)	Author	1347	0	1	0.26	350
Female	All female school (yes=1)	USNews	1347	0	1	0.03	41
Male	All male school (yes=1)	USNews	1347	0	1	0.00	1
Coed	School is coeducational (yes=1)	USNews	1347	0	1	0.97	1305
Diversity	If student population is more than 17 percent white (yes=1)	USNews	1343	0	1	0.47	633
aveACT	Average ACT score of incoming students	USNews	528	14	28	21.94	
aveSAT	Average SAT score of incoming students	USNews	757	705	1520	1085.6	
Research	If the school is a research university (yes=1)	Carnegie	1347	0	1	0.18	242
LiberalArts	If the school is a Liberal Arts College (yes=1)	Carnegie	1347	0	1	0.16	216
Masters	If the school is a Master's University (yes=1)	Carnegie	1347	0	1	0.42	566
Comprehensive	If the school is a Comprehensive University (yes=1)	Carnegie	1347	0	1	0.24	323

This table defines each variable, describes the source of the data and provides general statistics giving an overview of factors that are relevant in explaining colleges and universities graduation rates.

RESULTS

Regressions below examine the impact different variables, such as if a school has a teaching center and if the school uses learning communities, holding other influences constant to determine what influences graduation rates at institutions of higher learning in the US. Thus, the dependent variable, the graduation rate of school i, is a function of independent variables shown below.

$$\text{Graduation rate}_i = \beta_0 + \beta_1 X1 + \varepsilon_i \quad (1)$$

Where X1 = vector of variables

$$\textit{Graduation rate}_i = \beta_0 + \beta_1 \textit{FacultySalary} + \beta_2 \textit{StandTests} + \beta_3 \textit{TeachCenter} + \beta_4 \textit{LearnComm} + \beta_5 \textit{NSSE} + \beta_6 \textit{Public} + \beta_7 \textit{PerClsUnder20} + \beta_8 \textit{PerClsOver50} + \beta_9 \textit{Student faculty ratio} + \beta_{10} \textit{FacultyFT} + \beta_{11} \textit{Freshintop25} + \beta_{12} \textit{Acceptance rate} + + \beta_{13} \textit{Location} + \beta_{14} \textit{Diversity} + \beta_{15} \textit{Institution type} + \varepsilon_i \quad (2)$$

Due to multi-colinearity not all of the variables listed in Table 1 are used in the regressions. For example, freshmen retention and peer assessment are both highly correlated with standardized test scores so are excluded. In the regressions all of the variables are kept in their original form. That is, none of the variables were logged, squared or transformed in other ways. Most of the variables are quantitative so standard interpretations of the coefficients is possible, though I do not include any here.Nominal variables are put into a dummy variable format with a yes equaling one if the characteristic exists and a no for zero if it does not. The coefficient represents the difference between schools with the characteristic and those without it. For dummy variables with more than two outcomes, the excluded category is provided in the tables. The results of regression 1 is in Table 2.[1]

The majority of the control variables has the expected sign and is statistically significant. All else constant, colleges and universities that pay their faculty more have a higher graduation rate than other institutions. Colleges and universities with higher SAT and ACT scores and more students in the top 25 percent of their high school class have higher graduation rates than schools with lower standardized test scores and fewer students in the top of their high school.

All else constant, public schools have ten percent lower graduation rates than their private counterparts. Institutions with smaller class sizes retain and graduate more students than schools with larger classes, though very large class size does not matter compared to medium size classes. Colleges and universities with more minority students and those in an urban area have lower graduation rates than their counterparts. For a one tailed test, at the 10 percent level, schools with a higher student faculty ratio do not graduate as many pupils. Liberal arts colleges, research and comprehensive universities have higher graduation rates than comprehensive universities.

Interestingly, neither the existence of a teaching center or learning community improves graduation rates. Creating a teaching center for professors (and likely graduate assistants) and setting up learning communities for incoming students are both costly and time consuming endeavors. That they do not have the impact expected of them suggests that the resources committed to them might be better used elsewhere.

Table 2: OLS Regression- Dependent Variable: Graduation Rate

Independent Variables	Coefficients	Std. Error	T-Statistic
Intercept	0.056	0.084	0.663
FacultySalary (Ave faculty salary excluding instructors)	0.002	0.000	5.686***
StandTests (SAT and ACT converted to SAT)	0.000	0.000	5.906***
TeachCenter (yes=1 if has teaching center)	-0.003	0.010	-0.263
LearnComm (yes=1 if has learning communities)	-0.004	0.010	-0.377
NSSE (yes=1 if participated in NSSE)	0.006	0.007	0.865
Public (yes=1 if public)	-0.101	0.011	-9.102***
PerClsUnder20 (% of classes with fewer than 20 students)	-0.072	0.034	-2.108**
PerClsOver50 (% of classes with more than 50 students)	-0.002	0.002	-0.858
Student faculty ratio	-0.002	0.002	-1.607*
FacultyFT (Percent of faculty that is full time)	0.047	0.037	1.266*
Freshintop25	0.174	0.031	5.537***
Acceptance rate	-0.023	0.025	-0.927
Urban [a] (yes=1 if in urban location)	-0.017	0.009	-2.009**
Suburban [a] (yes=1 if in suburban location)	0.002	0.009	0.235
Diversity (yes=1 if population > 17% white)	-0.054	0.008	-6.468***
Research [b] (yes=1 if a Research University)	0.125	0.020	6.359***
LiberalArts [b] (yes=1 if a Liberal Arts college)	0.139	0.017	7.978***
Masters [b] (yes=1 if a Master's University)	0.025	0.009	2.690***
Number of observations: 935	R-squared: .802	F statistic: 147	
a: excluded category rural			
b: excluded category-comprehensive			
* statistically significant at the 10% level			
** statistically significant at the 5% level			
*** statistically significant at the 1% level			

This table shows the regression, graduation rates as a function of relevant variables. Graduation rate$_i$ = β_0 + β_1 FacultySalary + β_2 StandTests + β_3 TeachCenter + β_4 LearnComm + β_5 NSSE + β_6 Public + β_7 PerClsUnder20 + β_8 PerClsOver50 + β_9 Student faculty ratio + β_{10} FacultyFT + β_{11} Freshintop25 + β_{12} Acceptance rate + + β_{13} Location + β_{14} Diversity + β_{15} Institution type

While teaching centers and learning communities do not impact graduation rates at schools in general, there may be a marginal gain for certain types of colleges and universities. For example, the effectiveness of one or the other may exist depending on if the institution is public or private. The second regression, shown in Table 2, is the same as the first one except that interaction terms between variables that may impact graduation rates are also included. The focus of the relationships is with teaching centers and learning communities but a few other interaction terms are also included.

$$\text{Graduation rate}_i = \beta_0 + \beta_1 X1 + \beta_2 X2 \beta_3 X3 + \beta_4 X4 + \varepsilon_i \quad (3)$$

Where:

X1 = same vector of variables in regression 1
X2= teaching center interaction terms
TCXRES: impact of a teaching center on research universities only
TCXLA: impact of a teaching center on liberal arts colleges only
TCXMA: impact of a teaching center on masters universities only
TCXC: impact of a teaching center on comprehensive universities only
X3= learning communities interaction terms
LRNCOMXRES: impact of learning communities on research universities only
LRNCOMXLA: impact of learning communities on liberal arts colleges only
LRNCOMXM: impact of learning communities on masters universities only
LRNCOMXC: impact of learning communities on comprehensive universities only
X4= other interaction terms
LCXPUBLIC: impact of a learning center on public universities only
LCXTEST: impact of a teaching center with standardized test scores
LCXFACFT: impact of a teaching center with percent of faculty that is full time

$$\begin{aligned} \textit{Graduation rate}_i = {} & \beta_0 + \beta_1\ \textit{FacultySalary} + \beta_2\ \textit{StandTests} + \beta_3\ \textit{TeachCenter} + \beta_4\ \textit{LearnComm} + \beta_5 \\ & \textit{NSSE} + \beta_6\ \textit{Public} + \beta_7\ \textit{PerClsUnder20} + \beta_8\ \textit{PerClsOver50} + \beta_9\ \textit{Student faculty ratio} \\ & + \beta_{10}\ \textit{FacultyFT} + \beta_{11}\ \textit{Freshintop25} + \beta_{12}\ \textit{Acceptance rate} + + \beta_{13}\ \textit{Location} + \beta_{14}\ \textit{Diversity} \\ & + \beta_{15}\ \textit{Institution type} + \beta_{16}\ \textit{LCXRES} + \beta_{17}\ \textit{LCXLA} + \beta_{18}\ \textit{LCXMA} + \beta_{19}\ \textit{LCXC} \\ & + \beta_{20}\ \textit{LRNCOMXRES} + \beta_{21}\ \textit{LRNCOMXLA} + \beta_{22}\ \textit{LRNCOMXM} + \beta_{23}\ \textit{LRNCOMXC} \\ & + \beta_{24}\ \textit{LCXPUBLIC} + \beta_{25}\ \textit{LCXTEST} + \beta_{26}\ \textit{LCXFACFT} + \varepsilon_i \end{aligned} \quad (4)$$

Compared with regression 1, all of the control variables coefficients have almost the identical size, for example faculty salary is exactly the same and public is almost identical. In addition, the level of statistical significance is the same for all of the variables in both. Ironically, the sign for existence of a teaching center is now negative and statistically significant at the 10% level.

Of particular interest is how centers for teaching and the presence of learning communities impact graduation rates at different types of institutions. It does not increase graduation rates at Liberal Arts colleges and Masters universities and actually decreases graduation rates at comprehensive schools. However, for a one tailed test, at the 10 percent level a teaching center improves graduation rates at research universities. This makes sense, professors at research universities are primarily researchers and they spend a lot less time in the classroom than their counterparts at other schools. It is possible that just getting a little support for their teaching can add a lot to what they do in the classroom. In addition, many classes at research universities are taught by teaching assistants who are graduate students and new at teaching and part-time adjunct professors. A teaching center may add a lot of value to these groups.

Learning communities have no impact on graduation rates at research universities and liberal arts colleges and decrease it for masters schools. For a one tailed test the addition of learning communities is statistically significant at the one percent level in increasing graduation rates at comprehensive universities. Perhaps these institutions have a little less of a sense of camaraderie for incoming students. Grouping students by like interests helps them stay in school where it is not as meaningful at other types of institutions. Comprehensive universities also have lower rates of graduation in general than other schools. Perhaps the marginal impact of learning communities matters more for schools with lower graduation rates compared to those with higher rates.For a one tailed test, at the 5 percent level learning communities improve graduation rates at schools with a higher percentage of faculty who are full time. Full time faculty likely have a greater commitment to their institution than part time teachers. The existence of learning communities may enable professors to engage with like-minded students early in the student's career. For example, students with an interest in music may be grouped together and mentored by a faculty member in this discipline. Faculty may enjoy connecting with students who share an interest in their area and students may be more likely to stay and finish their degree.

CONCLUSION

Colleges and universities in the U.S have implemented a variety of programs aimed at increasing their graduation rates, including establishing teaching centers and grouping like-minded students into learning communities. Actions are sometimes taken without knowledge of their effectiveness. This paper addresses the issue of whether teaching centers and learning communities actually accomplish their goals. Information on faculty salaries, existence of a teaching center, school location, if the college participates in the National Survey of Student Engagement and other information are added to data from the *U.S. News and World Report* data on graduation rates. Regressions were estimated looking at the marginal impact of different variables first without interaction terms, then with them. Not surprisingly, results show that variables like student faculty ratio, the percentage of faculty that are full time and faculty salaries all contribute to higher graduation rates. It is interesting that the existence of student learning communities and if a school has a teaching and learning center for faculty does not improve graduation rates. But this only holds true if institutions are not separated by type and if the marginal impacts are not separated. By

using interaction terms where the influence of different factors can be isolated on the type of institution and other control variables, this research finds that in some situations the existence of teaching centers and learning communities will increase graduation rates.

Table 3: OLS Regression with Interaction Terms- Dependent Variable: Graduation Rate

Independent Variables	Coefficients	Std. Error	T-Statistic
Intercept	0.070	0.087	0.805
FacultySalary (Ave faculty salary excluding instructors)	0.002	0.000	5.980***
StandTests (SAT and ACT converted to SAT)	0.000	0.000	5.673***
TeachCenter (yes=1 if has teaching center)	-0.147	0.110	-1.329*
LearnComm (yes=1 if has learning communities)	-0.002	0.010	-0.220
NSSE (yes=1 if participated in NSSE)	0.006	0.007	0.831
Public (yes=1 if public)	-0.105	0.013	-8.431***
PerClsUnder20 (% of classes with fewer than 20 students)	-0.072	0.035	-2.083**
PerClsOver50 (% of classes with more than 50 students)	-0.002	0.002	-0.799
Student faculty ratio	-0.003	0.002	-1.679*
FacultyFT (Percent of faculty that is full time)	0.020	0.040	0.496
Freshintop25	0.172	0.031	5.481***
Acceptance rate	-0.024	0.025	-0.960
Urban [a] (yes=1 if in urban location)	-0.016	0.009	-1.816**
Suburban [a] (yes=1 if in suburban location)	0.001	0.009	0.092
Diversity (yes=1 if population > 17% white)	-0.054	0.008	-6.466***
Research [b] (yes=1 if a Research University)	0.089	0.025	3.620***
LiberalArts [b] (yes=1 if a Liberal Arts college)	0.134	0.018	7.333***
Masters [b] (yes=1 if a Master's University)	0.024	0.009	2.588***
TCXRES [c] (interaction terms- see below)	0.087	0.054	1.596*
TCXLA [c]	0.065	0.062	1.055
TCXMA [c]	0.042	0.045	0.925
TCXC [c]	-0.066	0.044	-1.490*
LRNCOMXRES [d]	0.011	0.020	0.565
LRNCOMXLA [d]	0.027	0.034	0.790
LRNXM [d]	-0.024	0.018	-1.343*
LRNCOMXC [d]	0.068	0.028	2.427***
TCXPUBLIC [e]	0.010	0.021	0.480
LCXTEST [e]	-0.0000046	0.000	-0.506
LCXFACFT [e]	0.166	0.093	1.775**
Number of observations: 935	R-squared: .807	F statistic: 96	
a: excluded category rural b: excluded category-comprehensive c: interaction terms- teaching center multiplied by: research, liberal arts, masters and comprehensive schools d: interaction terms- learning community multiplied by: research, liberal arts masters and comprehensive schools e: interaction terms: learning center multiplied by public, teaching center multiplied by standardized test scores and percentage of faculty who are full time respectively * statistically significant at the 10% level ** statistically significant at the 5% level *** statistically significant at the 1% level			

This table shows the regression, graduation rates as a function of relevant variables plus interaction terms. $Graduation\ rate_i = \beta_0 + \beta_1\ FacultySalary + \beta_2\ StandTests + \beta_3\ TeachCenter + \beta_4\ LearnComm + \beta_5\ NSSE + \beta_6\ Public + \beta_7\ PerClsUnder20 + \beta_8\ PerClsOver50 + \beta_9\ Student\ faculty\ ratio + \beta_{10}\ FacultyFT + \beta_{11}\ Freshintop25 + \beta_{12}\ Acceptance\ rate + + \beta_{13}\ Location + \beta_{14}\ Diversity + \beta_{15}\ Institution\ type + \beta_{16}\ LCXRES + \beta_{17}\ LCXLA + \beta_{18}\ LCXMA + \beta_{19}\ LCXC + \beta_{20}\ LRNCOMXRES + \beta_{21}\ LRNCOMXLA + \beta_{22}\ LRNCOMXM + \beta_{23}\ LRNCOMXC + \beta_{24}\ LCXPUBLIC + \beta_{25}\ LCXTEST + \beta_{26}\ LCXFACFT$

There are both positive and negative aspects of having a large data set to examine marginal impacts of variables on graduation rates. Some limitations are that there could be some micro characteristics impacting graduation that are not picked up by this research or that are not detected due to measuring variables at the college level. In sum, different institutions need to be selective in what type of policy they use when implementing programs aimed at increasing their school's graduation rates. Not surprisingly,

what works at a research university is different from what is useful at a comprehensive university. In addition to the different variables examined in this paper there are likely many others that future research could address.

Notes

[1] A stepwise type regression was also estimated using the stepwise function in SPSS. The highest R squared that was obtained was 0.849, a little higher than the reported R squared in the regression in Table 1. The stepwise regression suggested using rank in category as an independent variable and excluding The Urban category, some of the types of schools and the teaching center variable. Since there are only 686 observations for the rank in category this would lower the degrees of freedom. In addition, this data is ordinal and typically ordinal data is not included with ratio and interval level data that all of my other quantitative variables are. Since the focus of this paper is on if teaching centers matter, the variable needs to be included, whether it is statistically significant or not. Excluding some of the other dummy variables and including others does not make sense. The variables recommended with the stepwise regressions are almost identical to what is in the paper, so I have kept the original regression.

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BIOGRAPHY

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DEVELOPING COMMUNICATIVE COMPETENCE IN ENGLISH AS A SECOND LANGUAGE BY INTEGRATING BUSINESS COMPETENCIES

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ABSTRACT

This paper examines what business competencies a learner of English as a Foreign Language (EFL) can develop while developing communicative competence in English. The analysis is focused on the business competencies undergraduate students at the Administration Faculty of Universidad Michoacana de San Nicolás de Hidalgo need to develop. The study aims to demonstrate that using a competence formation model enables learners to attain better levels of communicative competence. Moreover, it strengthens their business competencies through classroom practice of real-life communicative activities, without having to study them separately or at different times. Finally, by incorporating self-assessment practices and a learning portfolio as tools to enhance learning by asking students to reflect on their own motivations or needs, we expect to contribute to developing learning autonomy and self-evaluation strategies as an integral approach to both professional and personal formation.

JEL: I2, I23

KEYWORDS: Competences, Communicative Competence, Autonomy, Business Competencies

INTRODUCTION

Traditionally, business professionals are required to be competent in a second language, whether they work abroad or not. Historically, the need to fluently communicate in English has become essential in business and for travel. Besides the communicative function of the language itself, English is essential to the deepening integration of global service-based economies. But even in non-English speaking countries, being communicative competent in English can be considered necessary (sometimes even a must) to get a well-paid job, regardless of the professional area one works in. This is particularly true as the outsourcing business grows, since most of the offshore contracts come from English speaking corporations and global enterprises create their own business process outsourcing centers in other countries to diminish costs.

Up to now, English is the language that facilitates transnational encounters and allows nations, institutions, and individuals in any part of the world, to communicate their world view and identities. This study attempts to provide a tool learners can use to make connections between positive learning outcomes and success experienced in a coursework on learning English, but also designed to specifically use the language to perform tasks required in the professional domain of business administration.

The article concludes with a discussion of the benefits of redirecting the main focus of English as a foreign language (EFL) courses within the curriculum of the Adminstration Faculty at undergraduate level at the Universidad Michoacana de San Nicolás de Hidalgo where merely mastering the language is not the sole objective. These EFL courses ought to be not only business-content, but should also aim to develop business competencies as well as higher metacognitive strategies, such as learning autonomy.

LITERATURE REVIEW

Many authors have long reviewed and commented on what competences are and how they are categorized since McClelland first introduced the term in 1973 (Martínez & Carmona, 2009). Initially, the study of competences started in the Labor Psychology field, searching to better select and improve human resources in firms and companies. Over time, the concept has broadened and it has reached educational and environmental contexts. Tejada (1999), Pereda y Berrocal (2001), Lévy-Leboyer (2003) and Escobar (2005) cited by Martínez and Carmona (2009) categorize competences as: a) generic, the ones that can occur in any of the positions of an organization and can be easily transferred from one profession to another, which means they are common to different professions. They include knowledge, skills, attitudes and personality traits; and b) specific: the ones that occur to certain professions within the organization, or with particular performance levels. They are non-transferable.

Nowadays, the competence concept in education concerns with the capacity of students to analyze, reason and communicate effectively as they pose, solve and interpret problems in a variety of subject areas and it has been considered important due to its relevance to lifelong learning (British Council, 2012). Being able to do so in one´s mother tongue is by itself one of the aims of public education policies, leaving behind the very basic objective of teaching literacy and numeracy and including today information technology as well as the learning of a foreign language. Thus, the role of education in school is seen as to provide the generic skills needed to acquire new knowledge and specialist skills in the future: learning how to learn.
In México such a foreign language is of course English. English as a Foreign Language (EFL) was introduced as a mandatory subject into the middle-school curriculum for all public schools since 1993 (Ministry of Education -Secretaría de Educación Pública- Agreement 182) and last year´s education reform made the teaching of EFL mandatory for basic education as well (Agreement 592, dated August 19, 2011), as a part of the implementation of a competency-based curriculum. Besides intending to raise the quality of education, this measure was implemented with the long term objective of facilitating international student and academic staff mobility. This seems to confirm that the learning of English appears to be losing its separate identity as a discipline and merging with general education (Graddol, 2006).

Since we are interested mainly, but not exclusively, in developing communicative competence in English, we will go with the work the Council of Europe has done regarding competences, and the classification they suggest towards the aim of forming participative, socially responsible individuals who develop a democratic citizenship. The Council of Europe (2001) defines some essential terms to facilitate the communication among users of a language and teaching professionals in the Common European Framework of Reference for Languages (CEFR).

Competences are then defined as the sum of knowledge, skills and characteristics or personal resources that allow a person to perform actions. General competences are those not specific to language, but which are called upon for actions of all kinds, including language activities, which include:

a) Declarative knowledge (*savoir*): it comprises knowledge of the world (which derives from experience, education or from information sources, etc.), sociocultural knowledge, and intercultural awareness.

b) Skills and know-how (*savoir-faire*): everything that has to do more with the ability to carry out procedures than on declarative knowledge. This skill may be facilitated by the acquisition of 'forgettable' knowledge and be accompanied by forms of existential competence (for example relaxed attitude or tension in carrying out a task). It comprises practical skills and know-how (social, living, leisure, and occupational skills) as well as intercultural skills and know-how.

c) 'Existencial' competence (*savoir-être*): it may be considered as the sum of the individual characteristics, personality traits and attitudes which concern, for example, self-image and one's view of others and willingness to engage with other people in social interaction. Attitudes and personality factors greatly affect not only the language users'/learners' roles in communicative acts but also their ability to learn. It consists of attitudes, motivations, values, beliefs, cognitive styles, and personality factors. This type of competence is not seen simply as resulting from immutable personality characteristics. It includes factors which are the product of various kinds of acculturation and may be modified.

d) Ability to learn (*savoir-apprendre*): it mobilizes existential competence, declarative knowledge and skills, and draws on various types of competence. Ability to learn may also be conceived as 'knowing how, or being disposed, to discover *otherness* ' – whether the other is another language, another culture, other people or new areas of knowledge.

The Communicative Competence

The taxonomic nature of the Common European Framework of Reference for Languages (CEFR) inevitably means trying to handle the great complexity of human language by breaking language competence down into separate components. This confronts us with psychological and pedagogical problems of some depth. Communication calls upon the whole human being. The competences separated and classified below interact in complex ways in the development of each unique human personality. Users and learners of a language draw upon a number of competences developed in the course of their previous experience in order to carry out the tasks and activities required to deal with the communicative situations in which they are involved. In return, participation in communicative events (including, of course, those events specifically designed to promote language learning) results in the further development of the learner's competences, for both immediate and long-term use. In that sense, all human competences contribute in one way or another to the language user's ability to communicate and may be regarded as aspects of communicative competence.

Communicative language competences are next defined as those which empower a person to act using specifically linguistic means (Council of Europe, 2001). The language activity required to perform communicative acts always occurs in a context that imposes conditions and constraints of many different kinds (also called domains of language use: public, personal, educational and occupational).
Thus, for communicative intentions, users/learners of a language bring to bear their general capacities as detailed above together with a more specifically language-related communicative competence. Communicative competence in this narrower sense has the following components: linguistic, sociolinguistic and pragmatic. Each of these components is postulated as comprising, in particular, knowledge and skills and know-how.

a) *Linguistic competences* include lexical, phonological, syntactical knowledge and skills and other dimensions of language as a system, independently of the sociolinguistic value of its variations and the pragmatic functions of its realizations.

b) *Sociolinguistic competences* refer to the sociocultural conditions of language use. Through its sensitivity to social conventions (rules of politeness, norms governing relations between generations, sexes, classes and social groups, linguistic codification of certain fundamental rituals in the functioning of a community), the sociolinguistic component strictly affects all language communication between representatives of different cultures, even though participants may often be unaware of its influence.

c) *Pragmatic competences* are concerned with the functional use of linguistic resources (production of language functions, speech acts), drawing on scenarios or scripts of interactional exchanges. It also concerns the mastery of discourse, cohesion and coherence, the identification of text types and forms,

irony, and parody. For this component even more than the linguistic component, it is hardly necessary to stress the major impact of interactions and cultural environments in which such abilities are constructed. The resulting outcome of the Council of Europe was a very comprehensive work that describes the competences necessary for communication, the related knowledge and skills and the situations and domains of communication where the occur. Communicative acts comprise language activity, which is divided into four kinds: reception, production, interaction and mediation. Reception entails understanding language produced by others, whether in speech or in writing, while production entails producing speech or writing. Interaction refers to spoken or written exchanges between two or more individuals, while mediation (often involving translation or interpretation) makes communication possible between individuals or groups who are unable to communicate directly. Clearly, interaction and mediation involve both reception and production. While learning EFL for general purposes, all language activities are stressed, but when focusing on developing business competences, interaction becomes an essential aim.

It is possible that competence formation one of the most effective ways to prepare future professionals to successfully deal with constantly changing working conditions. In Mexico, the implementation of such educational model is already taking place, as mentioned above. Therefore, the goal for university students to achieve B2 level according to the CFR has been set. In order to do so, the authors propose the use of a Language Learning Portfolio to develop the communicative competence in English as a Foreign Language (EFL) of university students aiming to achieve B2 level, which at the same time incorporates opportunities for students to develop business competences. A learning portfolio is a flexible, evidence-based process that combines reflection and documentation. It engages students in ongoing, reflective, and collaborative analysis of learning. It also focuses on purposeful, selective outcomes for both improving and assessing learning (Zubizarreta, 2009). The use of portfolios has proven to be a useful tool to enhance learning by asking students to reflect on their own motivation or needs to learn and their learning strategies while promoting autonomous learning and self-evaluation strategies. By allowing both teachers and students to experience the benefits of using a Language Portfolio, the learning and metacognitive strategies developed can be expanded to the learning of business competences through the use English and, thus, contributing to their learning of both professional and communicative competences.

The portfolio the authors propose is the "B2 Language Portfolio", designed in 2011 to meet the needs of students of English as a Foreign Language (EFL) at the Language Department at Universidad Michoacana de San Nicolás de Hidalgo (UMSNH) in the capital city campus, Morelia. It was based on the model launched in 2000 by the European Language Portfolio (ELP) and it conforms to the Principles and Guidelines defined by the Council of Europe that same year. It was designed as a tool to help students that reach the B2 level of proficiency in English, according to the Common European Framework of Reference for Languages (CEFR). Although there is a general template for learning portfolios (Zubizarreta, 2009) we decided to base ours on the model proposed by the Council of Europe (2006), since it was specifically designed to enhance the learning of any foreign/second language(s) by an international group of experts.

The Council of Europe developed the ELP in order to serve two complementary functions. The first is pedagogical: the ELP was designed to make the language learning process more transparent to learners and to foster the development of learner autonomy; that is why it assigns a central role to reflection and self-assessment. The second function is to provide concrete evidence of second/foreign language communicative proficiency and intercultural experience. In addition the ELP is intended to promote the development of plurilingualism, the ability to communicate in two or more languages besides one's first language (Little, et al., 2007).

The three obligatory components of the ELP are: a Language Passport, a Language Biography, and a Dossier. "The B2 Language Portfolio" adds a list of suggested activities in the Dossier section and a comprehensive list of websites for learning English. This was done in order to accompany the students

while they develop both communicative competence and learner autonomy (Calderón, 2011). To foster reflection and autonomy on the learning and development of business competencies, the Language Biography will be modified.

Business Competencies

Language is one of the foundations of human behavior: we use it continuously to perform communicative acts. Those acts may be external and social. In business settings, apart from holding conversations with colleagues, we are expected to hold formal meetings, make speeches or give lectures, write personal and official letters and of course extend knowledge in our domain of expertise. Communicative acts may also be internal and private. All forms of reading and some forms of listening are examples of this; so too are the many different ways in which we use language for purposes of thinking things through – for example, to plan the apology we have to make for absence from an important business meeting, or to prepare ourselves for a difficult interview by trying to anticipate the questions we shall be asked and working out what our answers should be. Productive activities have an important function in many academic and professional fields (oral presentations, written studies and reports) and particular social value is attached to them (judgments made of what has been submitted in writing or of fluency in speaking and delivering oral presentations).

While the Common European Framework of Reference for Languages (CEFR) focuses on language competences, it also mentions that *savoir-faire* comprises practical skills and know-how, particularly occupational skills. Occupational skills are also called competencies. Yet, a long series of arguments have taken place to diferentiate and/or to compare them. Here, we rather use what seems to be a simple distinction. Eicker, S., Kochbeck, J. and Schuler, P. (2008) state that *competencies* refer to observable behavior and skills and that *competence* is the level of achievement on how a competency is performed. This is better explained by saying that qualifications can be measured and proved through references, certificates and credentials. In case of skills which are acquired in informal learning processes, this kind of proof is generally not possible. A distinction in rating scales with parameter values e.g. ranging from "weak" to "strong" are too broad and arbitrary for an exact indication. Thus, they are insufficient for a precise classification. Therefore, competencies are measured by means of a multi-level competence scale. In order to assess subjective characteristics objectively, a precise scale identifying various levels of competence and maturity is essential. The classification shows that an employee on a high level in any company hierarchy must comply with different requirements and must have different competencies than a member of a lower level in the company hierarchy.

Competencies are graded in levels, either on the basis of a numerical scale or of a verbal schema. In order to develop a classification scale, both approaches can be combined: in addition to a numerical value marking each level, a verbal description is given. The classification scale is based on an ordinal scale, i.e. the levels of competence are ranked. Negative competencies are not included, because existing competencies are always positive. If a certain level is reached, this implies that the person also meets the criteria of the lower levels.

Mora J., García-Aracil and Vila, L. (2006) analyzed how the different kinds of competencies requested on a variety of job descriptions for college graduates in Europe affect not only level of income, but also job satisfaction. For their study, they used the thirty-six competencies listed on the "Careers after Higher Education – A European Research Survey", and concluded that, being everything else the same, positive attitudes toward work are better-paid than knowledge itself, and that in general, the more demanding a job is, the more satisfied the young graduate tends to be. Using factorial analysis they grouped occupational competencies into eight factors considered as the most valued by employers. Those factors are: 1) Participative, 2) Methodological, 3) Specialized, 4) Organizational, 5) Compliance, 6) Physical (manual skills and being physically apt to work), 7) Generic, and 8) Socio-emotional.

In their study, Mora et al. (2006) concluded that jobs which require a higher level on participative and methodological competencies are better paid. Business competences fall mainly within these categories, which provides empirical evidence to foster their development as an integral part of a curriculum. The communicative factor comprises such skills as planning, coordination, organization, negotiation, initiative, decision-making, persistence, personal involvement, leadership, and responsibility assumption. The methodological factor, on the other hand, is comprised of the knowledge of foreign languages, software knowledge, understanding of complex systems, economic reasoning, documenting ideas and information, problem-solving skills, and analytical competences. The socio-emotional factor is taken into consideration for this project since it includes such skills, attitudes and even values as teamwork, adaptability, honesty, loyalty, and tolerance to different viewpoints, all important to business competencies.

What Business Competencies Can Be Learned Simultaneously with a Foreing Language?

The authors consider that the following competencies can be developed throughout an English language course for students at the Business Administration Faculty at the Universidad Michoacana. Definitions are included only for explanatory purposes.

Ability to learn: The ability to observe and participate in new experiences and to incorporate new knowledge into existing knowledge, modifying the latter where necessary. This competence has been pointed out as a preferred personal attribute when hiring someone for a job or promoting him or her.
Achievement Drive: Possesses sustained energy and determination to set and meet challenging objectives. The ability to organize resources to achieve a standard of excellence in outcomes and monitor on-going performance.

Business Acumen: The understanding of key business drivers for performance and use of sound business practices. The ability to use sound commercial principles in all areas of responsibility.

Communication: The ability to effectively share ideas, thoughts, information and feelings with a diverse range of audiences to develop two-way understanding. It includes speaking, listening and written communication skills. The ability to influence others towards a desired way of thinking or course of action and to secure agreement to achieve common goals through effective negotiation.

Compliance: The practice of obeying a law, rule, or request or the ability to strictly following procedures, standards and regulations in order to avoid mistakes, problems or risks.
Continuous learning: Maintains a commitment to personal and professional development, keeping abreast of current professional knowledge and to acquire specialized knowledge.

Flexibility and adaptability: The individual is open and receptive to appropriate change. The ability to manage and shift priorities as required, and to incorporate new approaches in support of changing needs. Possesses confidence in challenging the status quo and providing input to change efforts and to make decisions accordingly.

Intercultural awareness: As a social agent, each individual forms relationships with a widening cluster of overlapping social groups, which together define identity. In an intercultural approach, it is a central objective of language education to promote the favorable development of the learner's whole personality and sense of identity in response to the enriching experience of otherness in language and culture.

Language learning abilities: They enable the learner to deal more effectively and independently with new language learning challenges, to see what options exist and to make better use of opportunities. Ability to

learn in an EFL learning setting has several components, such as language and communication awareness; general phonetic skills; study skills; and heuristic skills.

Leadership: The ability to lead, guide and motivate groups of people to deliver results, build teams and encourage risk taking, initiative and responsibility. The confidence to display leadership even when not acting in a formal leadership role.

Managing People: The ability to manage people to achieve maximum efficiency and productivity. The knowledge and understanding of management practices that enables the effective use of a performance framework to manage performance, clarify expectations, provide coaching and feedback, reward staff, lead by example and identify development needs.

Negotiation skills: The individual is able to lead the process of discussion between two or more disputants and seeks to find a solution to a common problem, one that meets both parts´ needs and interests acceptably. Dealmaking is an integral aspect of nearly every executive's job, yet most have not had any formal training. Learning to be a skilled negotiator can help to make deals, solve problems, manage conflict, and preserve relationships.

Relationship Building: The ability to identify, build and maintain formal and informal networks and productive relationships with both internal and external stakeholders. It includes leveraging these contacts to influence positive outcomes for the organization.

Service Focus. A desire to help or meet the needs of others. The ability to respond to the changing needs of the client while maintaining a high standard of quality.

Strategic Thinking: The ability to think strategically about longer term goals, plans, needs and capabilities that address the needs of the area or unit and the organization. The provision of strategic direction to the area or unit in terms of analysis, advice and direction.

Teamwork and effective team building skills: The ability to work cooperatively across organizational boundaries to achieve shared goals. Possesses an understanding of team dynamics and provides tangible contributions to teams, fostering collaboration and an environment of mutual trust and respect that leads to a reliable commitment to teamwork.

Let us have a more detailed look at the language learning abilities, which are developed in the course of the experience of learning. Since they enable the learner to deal more effectively and independently with language learning challenges the learner should be aware that the same process can applied to a business professional context. It is expected that any business professional can analyze, evaluate and make decisions in business settings in an independent, responsible and autonomous way. Therefore, building up this ability while learning EFL will result in a more efficient learning, since the metacognitive analysis of both learning outcomes is quite similar. Ability to learn in an EFL learning setting has several components, such as language and communication awareness; general phonetic skills; study skills; and heuristic skills. It is not difficult to see that these components are also essential for those professionals striving to make a career in international business.

The above components and have a direct impact on improving a learner´s chance to succeed in the business world, so we discuss them in a more detailed way:

1) Language and communication awareness. Sensitivity to language and language use, involving knowledge and understanding of the principles according to which languages are organized and used, enables new experience to be assimilated into an ordered framework and welcomed as an enrichment. The

associated new language may then be more readily learnt and used, rather than resisted as a threat to the learner's already established linguistic system, which is often believed to be normal and 'natural'.
2) General phonetic awareness and skills. Many learners, particularly mature students, and our university students can beconsidered so, will find their ability to pronounce new languages facilitated by: an ability to distinguish and produce unfamiliar sounds and prosodic patterns; an ability to perceive and catenate unfamiliar sound sequences; an ability, as a listener, to resolve (i.e. divide into distinct and significant parts) a continuous stream of sound into a meaningful structured string of phonological elements; an understanding/mastery of the processes of sound perception and production applicable to new language learning. It is important to note that these general phonetic skills are distinct from the ability to pronounce a particular language.

3) Study skills. They include the ability to make effective use of the learning opportunities created by teaching situations, such as the following: to maintain attention to the presented information; to grasp the intention of the task set; to co-operate effectively in pair and group work; to make rapid and frequent active use of the language (or negotiation tactic) learned; ability to use available materials for independent learning; ability to organize and use materials for self-directed learning; ability to learn effectively (both linguistically and socioculturally) from direct observation of and participation in communication events by the cultivation of perceptual, analytical and heuristic skills; awareness of one's own strengths and weaknesses as a learner (or negotiator); ability to identify one's own needs and goals; ability to organize one's own strategies and procedures to pursue these goals, in accordance with one's own characteristics and resources.

4) Heuristic skills. These include: a) the ability of the learner to come to terms with new experience (new language, new people, new ways of behaving, etc.) and to actively use other competences (e.g. by observing, grasping the significance of what is observed, analyzing, inferencing, memorizing, etc.) in the specific learning situation; b) the ability of the learner (particularly in using target language reference sources) to find, understand and if necessary convey new information; and c) the ability to use new technologies (e.g. by searching for information in databases, hypertexts, etc.).

How Does Self-Evaluation Enhance Development of Competencies?

There has been some discussion about the fact that some people are more successful at some competences than at others, and that business people either possess them or they don't. Leadership skills, for example, are thought to be quite often natural. Though an individual can work to improve his ability to lead, he will likely never be as successful a leader as someone who simply is more charismatic. The idea of working with a language learning portfolio is that, no matter what the level of achievement of a certain competence the learner has, he or she can always improve it by following the steps of self-assessment provided by the theoretical model for self-evaluation provided by Rolheiser (1996). According to this model, teachers need to help students develop productive goals and action plans to move forward and to get involved in what she calls an "upward cycle of learning".

Rolheiser also states that the most difficult part of teaching students how to evaluate their work consists of designing ways to provide support for students as they use self-evaluative data to set new goals and levels of effort. Teachers need to be cautious here since, without their help, students may be uncertain whether they have attained their goals. Teachers can also help students connect particular levels of achievement to the learning strategies they adopted and the effort they expended. Finally, teachers can help students develop viable action plans in which feasible goals are operationalized as a set of specific action intentions.

Self-confidence and self-esteem are two aspects that can help business professionals overcome the rejections commonly associated with business deals. Research indicates that self-evaluation plays a key

role in fostering an upward cycle of learning (Rolheiser & Ross, 1998), so by working with tools such as the B2 Language Portfolio, both self-esteem and self-confidence are expected to be positively impacted. The theory that supports Rolheiser´s model argues that when students evaluate their performance positively, self-evaluations encourage students to set higher goals and commit more personal resources or effort to them. The combination of goals and effort equals achievement. A student's achievement results in self-judgment, for example, when a student contemplates the question, "Were my goals met?" which leads to self-reaction, or a student responding to the judgment with the question, "How do I feel about that?". Goals, effort, achievement, self-judgment, and self-reaction all can combine to impact self-confidence in a positive way. Self-evaluation is really the combination of the self-judgment and self-reaction components of the model, and if we can teach students to do this better we can contribute to an upward cycle of better learning, whichever the subject matter is.

Nevertheless, a downward cycle could develop if there was a significant gap between students' goals and those of the classroom or if students perceive themselves to be unsuccessful performers. In the downward cycle low self-evaluations lead students to develop negative orientations toward learning, select personal goals that are unrealistic, adopt learning strategies which are ineffective, exert low effort, and make excuses for poor performance. Here, the teacher plays a very important role in assisting his or her students overcome these problems, and can take advantage of the situation to practice another key competence to business people, negotiation.

For this model to work appropriately, a negotiation between the teacher and the students has to take place in determining the evaluation criteria that will be used to judge their performance. Neither imposing school goals nor acquiescing to student preferences is likely to be as successful as creating a shared set that students perceive to be meaningful. This is based on workplace studies, which are known for indicating that involving employees in making decisions about their work increases satisfaction and goal commitment. It is easy to see then the close relationship between effective learning environments and business settings. In addition to increasing student commitment to instructional goals, negotiating intentions enables teachers to help students set goals that are specific, immediate, and moderately difficult, characteristics that contribute to greater effort. It also provides an opportunity to influence students' orientations toward learning, a long term guidance effort, that is particularly timely in cooperative learning contexts since students sometimes adopt orientations in group learning (such as letting someone else do all the work) that impede learning. Clearly, team building skills will also benefit from the use of self-evaluation. Even those learners who are very strong at certain skills can start practicing coaching others, as a part of a communicative activity with the primarily language objective to develop fluency but with the very engaging topic of actually helping a peer.

Hence, more than simply considering the language class a simple English for Specific Purposes class (ESP), acquiring the core vocabulary to perform the basic functions in the field, investing time to teach students how to perform an effective self-evaluation and therefore promote reflection on the students´ own learning process of both language and the professional skills, will result in an individual better-equiped to outstand in his or her working field. The idea is to promote the development of complex capacities that enable students to think and act in various fields of activity, aiming to put knowledge in action, to use a sound knowledge base that can be put into practice and used to explain what is happening. Using the competency-based curriculum model, where exit profiles specify the classes of situations that learners must be able to handle competently by the end of their education, we propose these classes of situations are identified either on the basis of real-life or business-related situations.

METHODOLOGY

This paper proposes that university business/management students use a Portfolio similar to the B2 Language Portfolio, the Business Competences Portfolio (BCP). The BCP uses English as a means to

introduce both teachers and students to competence-based work. Thus, students have the chance to improve their linguistic proficiency in English while learning and developing business competencies, which at present are left aside in the formal curriculum. At the UMSNH´s undergraduate program, it is currently left to the teacher to decide whether to include the development of business competencies in the course contents, assuming he or she knows how to do it or is interested in doing it. On the other hand, many of our students are still very dependent on their teachers. Using a learning portfolio fosters both learner autonomy and the use of self-assessment (Little, D. & Perclová, R., 2003, 2007; Zubizarreta, J., 2009; Chen, H. & Black, T, 2011; Dobrow, S., Smith, W. & Posner, M., 2011), which are also core objectives of this project. Successful students assume the responsibility of their own learning and are willing to expand it to other subjects of interest as a lifelong activity. Furthermore, Daniels (2010) reports that Human Resources managers find that, in general, being proficient in a foreign/second language adds professional and personal value to employees.

The Business Competences Portfolio (BCP) is to be piloted at the Universidad Michoacana (UMSNH)´s Faculty of Administration and Accounting, with two testing groups and two control groups. One control group and its correspondent testing group will be freshmen who are basic users of English (A1 level of the CEFR); and the other two groups will be students who are independent users of the language (B1+ level). The study will also aim to find if students who attend more advanced courses in the Business Administration Faculty (the ones who are also more likely to have a higher level of proficiency in English) have indeed learned more business tools than freshmen. The BCP is currently being developed by the authors and is intended to be piloted during the spring semester 2013.

RESULTS

Based on the literature review and on our own experience, the authors expect to find the following: a) if there is a correlation between the students´ level of achievement in developing communicative competence and business competencies; b) what business competencies our students are best at and which ones need to be reinforced; c) the students´ feelings and impact on motivation when they play a more active role directing their learning process; d) whether students´ attitudes towards evaluation change; e) what aspects of the portfolio need to be improved or replaced; f) how much interest the tool raises among faculty teachers and students, and if it does not dimish once enthusiasm for novelty fades; g) set the basis for launching the definite version of an ePortfolio; and h) whether the students´ intercultural competence improves, since Michoacan is home to the P´urepecha, one of the many native people striving to survive in Mexico, and if the BCP promotes awareness of a foreign culture while reinforcing our local identity.

Scope and Limitations

The authors foresee the following challenges that this research project will have to meet. To begin with, learners must have a clear understanding of the course objectives, and the teacher must be cautious not to raise unreal expectations, even if their level of competence improves, everyone will reach a different level of achievement. Moreover, they will probably need to devote more time and effort in order to fulfill the course tasks, so only the very motivated ones are expected to reach the course end. As in any class, dropouts are certain to occur, but to what extend is an unanswered question yet.

Moreover, we believe that learners might not be likely to develop some competencies which require expert knowledge, such as the Financial one, which can involve developing and presenting budgets that realistically reflect the needs of a department or division, initiating cost containment measures within one area of responsibility and monitoring budget variances as well as taking corrective action. We are aware that this can be the result of the authors' lack of formation on such particular areas, and that it could be a limitation that is not due to students´ capacities. On the other hand, it will be interesting to find out if learners coaching competence can make it up for the teacher´s lack of expertise in those fields.

For other competencies a real workplace atmosphere and organizational structure can be necessary, and if they are simply discussed in class with a rather theoretical approach, learners might feel disappointed and tempted to go back to "typical" classroom practices. This can be true for the Process Management competency, for example, which aims to determine the necessary processes to get things done, to break down work into process steps, to manage schedules and tasks to complete all assignments and to monitor processes, progress, and results. Obviously, the course does not attempt to develop Customer Focus competency, which would demand to practice dedicating to meeting the expectations of customers, taking personal responsibility for customer satisfaction and developing communication channels to fully understand customer expectations, among others.

CONCLUSIONS

Competence formation is possibly one of the most effective ways to prepare future professionals to successfully deal with constantly changing working conditions. Competence as an organizing principle of the curriculum is a way to bring real life back into the classroom (Jonnaert, P. et al, Prospects, UNESCO, 2007). It is thus a move away from the idea that curriculum is mainly implemented by having students reproduce theoretical knowledge and memorize facts (the conventional knowledge-based approach). In Mexico, the implementation of such educational model is already taking place. A competence-based approach implies that learners practice how to do business in English, recognizing that people need more than just phrase lists and useful language boxes to operate effectively in real-life business situations. Personal and professional competences provide a framework to manage organizational culture, management as a core competency, leadership development, and drive organizational performance, which become the greatest determinants of employee performance, assuming the individual possesses the required threshold of technical competencies.

The implementation of a learning portfolio has two main implications, the first one is pedagogical: it is designed to make both the language and business competencies learning process more transparent to learners and to foster the development of learner autonomy; that is why it assigns a central role to reflection and self-assessment. This function reflects a commitment to develop learner autonomy as an essential part of education for democratic citizenship and a prerequisite for lifelong learning. The second function is to provide concrete evidence of second/foreign language communicative proficiency and intercultural experience.

Language learning abilities are developed in the course of the experience of learning. They enable the learner to deal more effectively and independently with new language learning challenges, to see what options exist and to make better use of opportunities. This is exactly what is expected any business professional can do when analyzing, evaluating and making decisions in business settings. Therefore, building up this ability while learning EFL will result in a more efficient learning, since the metacognitive analysis of both learning outcomes is quite similar. Ability to learn in an EFL learning setting has several components, such as language and communication awareness, general phonetic skills, study skills and heuristic skills. It is not difficult to see that these components are also essential for those professionals striving to make a career in international business. By providing university students with a Business Competencies Portfolio, the authors expect to help them not only develop communicative competence in English, but to help them build the key competencies they will need to set up a successful career. Furthermore, autonomy and competencies development might well be oriented at the individual´s self-realization, as a way for the realization of a vital project focused on the production goods and services that meet the needs of the community.

Finally, we agree with Graddol (2006) that it is time for a change in the teaching/learning paradigm, and that by using English for global communication (English as a Lingua Franca, ELF) we focus on pragmatic strategies required in intercultural communication, the second main objective of the Language Portfolio.

The target model of English, within this framework, is not a native speaker but a fluent bilingual speaker, who retains a national identity in terms of accent, and who also has the special skills required to negotiate understanding with another non-native speaker. Research is also beginning to show how bad some native speakers are at using English for international communication. He suggests that elements of an ELF syllabus could usefully be taught within a mother tongue curriculum. We look forward to integrating such intercultural awareness through English, as a complement to the curriculum in Spanish.

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ADDING MARKOWITZ AND SHARPE TO PORTFOLIO INVESTMENT PROJECTS

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ABSTRACT

Introductory investments courses revolve around Harry Markowitz's modern portfolio theory and William Sharpe's Capital Asset Pricing Model. Nonetheless, the textbook versions of these seminal contributions tend to obscure their economic insights, focusing instead on their mathematical consequences. In this paper, we suggest simple additions to the basic portfolio spreadsheet project that will distinguish the economics (e.g., the market portfolio is efficient) from its necessary consequences (e.g., the beta-expected return relationship is linear). We also show that it is important to use Excel's MMULT function, not Solver, to find efficient portfolios.

JEL: G10, G11

KEYWORDS: Portfolio Theory, CAPM, Investments Pedagogy

INTRODUCTION

An investments course without Harry Markowitz and William Sharpe is unthinkable. Markowitz's (1952) modern portfolio theory and Sharpe's (1964) Capital Asset Pricing Model (CAPM) are the bedrock upon which investments courses are built. Nonetheless, a student does not actually see the concepts as the authors originally presented them; unless she takes one of the few doctoral-level classical papers courses, she sees instead only a textbook distillation. This distillation obscures important detail—in particular, it muddles the distinctions between the authors' (Nobel-prize-winning) economic insights and their purely mathematical consequences.

In this paper, we show how a few simple spreadsheet-based tweaks to a traditional investments project can highlight these critical distinctions. Excel's matrix multiplication functions allow students to identify mean-variance efficient portfolios easily. With those portfolios in hand, they can replicate Markowitz's graphs that show efficient portfolios lying on a line (not on a parabola!), and they can verify Roll's (1977) critique of tests of the CAPM—the observation that it is always possible to derive a linear beta/return relationship ex post. Students who have worked through these sorts of exercises will have a much deeper understanding of modern portfolio theory.

The paper proceeds as follows. After reviewing the relevant literature in the next section, we show how students can recreate Markowitz's presentation of efficient portfolios as the tangencies between isomean lines and isovariance ellipses. Next, we turn to Sharpe's CAPM, demonstrating a simple exercise that will lead students to a linear "Security Market Line." We then briefly summarize and conclude.

LITERATURE REVIEW

This paper links two types of finance literature: the seminal theoretical works of Markowitz (1952) and Sharpe (1964) (now more often referenced than read) and the ongoing pedagogical work on teaching their theories using spreadsheets.

"The Capital Asset Pricing Model…is the centerpiece of modern financial economics," for which "Harry Markowitz laid down the foundation" in 1952 (Bodie, Kane, and Marcus, 1993). Given the centrality of Markowitz's modern portfolio theory and Sharpe's CAPM, it is not surprising that significant periods of investments courses, and numerous chapters of investments texts, revolve around these concepts. For example, Fama and Miller (1972) devote a chapter each to Markowitz's ("pioneering") and Sharpe's concepts—almost one-third of their text, which covers both corporate and investments topics. Bodie, Kane, and Marcus's second edition (1993) devotes two sections (eight chapters) to portfolio theory and capital market equilibrium, all of which are still present in the ninth edition (2011). The 2012 Chartered Financial Analyst curriculum devotes five of 69 readings at Level I to portfolio theory and capital market equilibrium—a significant allocation, given that the scope includes financial accounting, micro- and macroeconomics, ethics, probability, quantitative methods, fixed-income and equity analysis, derivatives, and alternative investments.

However, a standard investments curriculum offers only a highly distilled version of what Markowitz and Sharpe presented in 1952 and 1964. Since the students who do the best in finance are those who really understand the basics (Dubofsky, personal communication, 1988), serious students are well served by considering the sources of their textbook summaries. Nonetheless, that source material is routinely ignored.

It may be that investments professors have tended to shy away from the source material because Markowitz's and Sharpe's treatments require more math than professors—especially of undergraduate students—are willing to assume or able to incorporate into their courses. However, now that Excel and other readily available programs incorporate matrix multiplication functions and optimizers, it is easy to create straightforward exercises that demonstrate portfolio mathematics. These can be seamlessly integrated into the spreadsheet-based projects that are ubiquitous in investments courses already.

There are many examples of investments projects incorporating spreadsheets. Kalra and Weber (2004) outline a basic task-based investments project covering the standard metrics for a single stock; Kish and Hogan (2009) expand this to multiple assets. Neumann (2008) incorporates efficient markets arguments by linking his project to the *Wall Street Journal's* long-running dartboard contest. Moving still further into the "real world," Girard, Pondillo, and Proctor (2005) describe a project incorporating performance attribution analysis. The most recent papers have demonstrated Monte Carlo simulations; for example, Ammar, Kim, and Wright (2008) demonstrate simulations using both Excel's built-in functions and Crystal Ball add-ins.

The papers most relevant for our work are those that show students how to use Excel to find mean-variance efficient portfolios. Carter, Dare, and Elliott's (2002) approach is the most straightforward: they demonstrate optimization using Excel's Solver. Solver is an add-in that performs optimization subject to constraints. The tool is easy to use; students learn it quickly and like it. Bodie, Kane, and Marcus (2011) have incorporated a basic Solver-based exercise into their influential textbook, having students derive the efficient set for a 7-asset international portfolio. They suggest first finding the global minimum-variance portfolio (as do Carter, Dare, and Elliott), then finding additional points on the efficient set of risky assets by iteratively changing the required risk premium.

Despite Solver's power, however, its routine is not always able to find a solution; worse, sometimes it appears to, but has not. Johnson and Liu (2005), who extend Carter, Dare, and Elliott's procedure to allow for investable short sales, suggest using Solver iteratively to derive an optimum. This also may not work. Thus, we also suggest introducing students to Arnold's (2002) matrix multiplication (MMULT) method. It seems less user-friendly than Solver, but students can follow easily the process Arnold outlines. In fact, once the spreadsheet is set up, the matrix method is actually easier and faster than Solver. We will follow Arnold's MMULT method in the work that follows.

Once students are able to identify efficient portfolios, they can learn from experience what Markowitz means when he says, "[t]he point of the isomean line at which [variance] takes its least value is the point at which the isomean line is tangent to an isovariance curve." They see for themselves that the locus of these tangencies is a straight line. As for the CAPM, they can learn why Roll asserted in 1977 that there is "practically no possibility" that "a correct and unambiguous test" of the CAPM "can be accomplished in the future." To demonstrate these opportunities, we turn first to Markowitz.

PROJECT ADDITIONS FROM MARKOWITZ

Investment students, including undergraduates, should read Markowitz's original 1952 paper "Portfolio Selection." Then they will see that mean-variance optimization is not the first or most obvious choice for creating portfolios: Markowitz initially considers (but quickly rejects) plunging into the asset with the highest discounted expected return or diversifying across multiple assets offering the highest expected return. Only then does he present his expected-returns/variance-of-returns rule, complete with definitions of expected return, variance, covariance, portfolio return, and portfolio variance. Students will have seen all of this in their texts; however, seeing its initial presentation provides invaluable reinforcement. More interestingly, Markowitz's illustration of the efficient set of risky assets is different from current textbooks'. Not only does he use variance instead of standard deviation as his risk measure, he also puts return on the *x* axis, so that the efficient frontier is in the southeast corner of the graph, sloping up and left. Having students consider the shape of the frontier in a different space deepens their appreciation for efficiency. It also prepares them for what Markowitz does next—and what modern textbooks do not do at all—presenting the efficient set on its "real" axes: the asset weights.

Markowitz's Linear Efficient Set

The problem with the traditional textbook presentation of the efficient set is that it plots portfolio expected return against portfolio standard deviation—that is, it depicts portfolios in (σ_p, $E(R_p)$) space, in which the minimum-variance set traces out a nice, bullet-shaped curve. As nice as the graph looks, this presentation obscures the true drivers of both expected return and variance: the portfolios' asset weights. Variance does not determine expected return; instead, both are determined by the chosen weights. Appreciating this is critical to understanding portfolio theory.

The most important graph for students is Markowitz's Figure 2, in which he illustrates the determination of the efficient set for a portfolio of three assets. However, before considering this, students should work through the simpler two-asset case. This basic case is interesting because all two-asset portfolios are minimum-variance. Since there is only one weighting scheme that will deliver a target $E(R_p)$ (assuming that the assets have different expected returns), that weighting scheme *must* be the lowest-variance way to deliver that expected return. Students should create multiple two-asset portfolios in Excel and plot them for themselves in (σ_p, $E(R_p)$) space—they will be quite gratified to see their portfolios plot out so beautifully on a parabola.

Moving to the *n*-asset case, however, is much more challenging. Given more than two assets, there are multiple ways to generate a target $E(R_p)$, only one of which is minimum-variance. Markowitz discusses only the three-asset case in detail (mentioning the four-asset case in a footnote, and noting that his results extend to *n* assets). He makes the case in his Figure 2. In this figure, he identifies efficient portfolios in ($weight_1$, $weight_2$) space, where $weight_i$ is the proportion of portfolio funds invested in asset *i*. In this space, Markowitz identifies portfolios offering the same level of expected return and the same level of variance. The former he calls "isomeans"; these plot as lines, the slope of which depends upon the expected returns of the various assets. "Isovariances," on the other hand, form a set of concentric ellipses (assuming no pair is perfectly positively correlated), whose center is the global minimum-variance

portfolio. Efficient portfolios maximize expected return for any given level of variance; these portfolios are the tangencies between an isovariance ellipse and an isomean. These tangencies trace out a line in ($weight_1$, $weight_2$) space. Students accustomed to seeing efficient portfolios lying on a parabola may be surprised by this.

They may also be surprised at the ease with which they can now find the efficient set of risky assets. Given two points from Markowitz's linear efficient-set relationship, they can generate the others simply as other points on that line. This is a much easier approach to the three-asset case than is a serial application of Solver.

Figure 1 illustrates the steps I ask my students to follow to generate their efficient set. The graphs are based on a three-asset universe, where assets 1, 2, 3 have expected returns of 15%, 25%, and 10%, respectively, with correlations $\rho_{12} = 0.5$, $\rho_{13} = -0.2$, and $\rho_{23} = 0$.

First, two-asset portfolios of assets 1 and 2 are plotted against various three- asset portfolios. (Note that the equally weighted [EW] three-asset portfolio is shown as a triangle.) This is part of a basic investments project: students create portfolio weighting schemes using two and three assets; they determine the portfolios' expected returns, variances, and standard deviations; they then plot their results in the standard (σ_p, $E(R_p)$) space. With this plot, students can see that their two-asset portfolios fall on a perfect parabola: all two-asset portfolios are minimum-variance. However, they also see that their three-asset portfolios do not behave as nicely. Moreover, while some three-asset portfolios dominate some two-asset portfolios, not all do.

Next, we add three efficient three-asset portfolios. By adding these, students learn that the efficient frontier is still bullet-shaped, but that it has moved to the left (in the preferred direction, to lower standard deviations). Markowitz illustrates the same point, using up to four assets, then asserts (in his Figure 6) that the result holds for *n* assets.

Using Excel, students can see this extension for themselves. As noted earlier, both Carter, Dare, and Elliott (2002) and Arnold (2002) describe Excel-based methods for identifying efficient portfolios. Before continuing with Figure 1, we must digress briefly to consider these two methods—since only one of them proved reliable for our purposes.

First, following Carter, Dare, and Elliott (2002), we used Solver to identify two efficient portfolios based on the EW: the efficient portfolio with the same expected return as EW (the "return-matched" portfolio, $E(R_p) = 16.667\% = E(R_{EW})$), and the efficient portfolio with the same standard deviation as EW (the "variance-matched" portfolio, $\sigma_p = 11.667\% = \sigma_{EW}$). We also used Solver to determine the global minimum-variance portfolio ("GMVP"). We then repeated this process using Excel's matrix multiplication "MMULT" function, as in Arnold (2002). In Table 1, we show our numerical results from these two sets of optimizations.

Table 1 shows that Solver and MMULT give us different portfolio weights for each of the three portfolios. Their results match most closely for the return-matched portfolio; they are farthest apart for the global minimum-variance portfolio. Which portfolios are truly efficient?

We can answer this by turning to Markowitz—to the very relationship we ask students to consider. Our point in asking students to find several efficient portfolios is to show them that these portfolios will lie on a line in ($weight_1$, $weight_2$) space. This is Markowitz's linear efficient set. However, for this to work, students must have truly efficient portfolios. At the bottom of Table 1, we resolve the Solver/MMULT differences by working this relationship backwards: we calculate the slope implied by the portfolios

generated by both methods. (For example, in the first row, we find the change in the weight of asset #2 from the global minimum-variance portfolio to the return-matched portfolio, divided by the change in the weight of asset #1.) The portfolios found using MMULT lie on a line in weight space; they therefore are efficient. However, portfolios found using Solver do not lie on a line; Solver's results, while close approximations, therefore are not efficient. Given the problems with Solver, students should use MMULT to complete the generation of the efficient set. (Please see appendix for a brief synopsis of Arnold's MMULT instructions. Also, note that we used the GRG Nonlinear engine to solve our problems. This engine is used for smooth, nonlinear problems. Solver also has an LP Simplex engine for linear problems and an Evolutionary engine for nonsmooth problems.)

(Figure 1 also gives a graphical example of our problems with Solver: As highlighted by the points marked "Solver test," when Solver was constrained to find the efficient portfolio whose expected return equaled 25%, its result fell far outside the efficient set. Two additional results illustrate issues with this optimizer. First, for the global minimum-variance portfolio, Solver's solution returns the w_1 value from $[\delta\text{variance}(w_1, w_2)/\delta w_1 = 0]$, setting $w_2 = 0$: $[(\sigma_3^2 - \sigma_{13})/(\sigma_1^2 + \sigma_3^2 - 2\sigma_{13})]$. However, this ignores the dependence of w_2 on w_1. Second, for the return-matched portfolio, while Solver seems to give the lower variance, it actually violates the weight constraint. In two applications of Solver to this problem, we got two slightly different answers; in both cases, Solver's "solutions" gave weights that added to slightly more than 1. [This happened in no other case during our Solver trials.] Given that the whole point of our project is to show students how efficient portfolios behave, even slight deviations destroy the exercise.)

Table 1: Using Excel's Solver and MMULT to Identify Efficient Portfolios

	(a) GLOBAL MIN-VAR		(b) SAME E(R) AS EW		(c) SAME VAR AS EW	
	Solver	MMULT	Solver	MMULT	Solver	MMULT
weight$_1$	0.8182	0.8469	0.649125	0.649123	0.5066	0.5070
weight$_2$	0.0000	-0.0306	0.228069	0.228070	0.4141	0.4140
weight$_3$	0.1818	0.1837	0.122807	0.122807	0.0793	0.0791
E(R_p)	0.1409	0.1378	0.1667	0.1667	0.1874	0.1874
variance$_p$	0.0073	0.0072	0.009400578	0.009400585	0.013612033	0.013612027
	Solver	**MMULT**				
slope (a)-(b)	-1.349	-1.308				
slope (a)-(c)	-1.329	-1.308				
slope (b)-(c)	-1.305	-1.308				

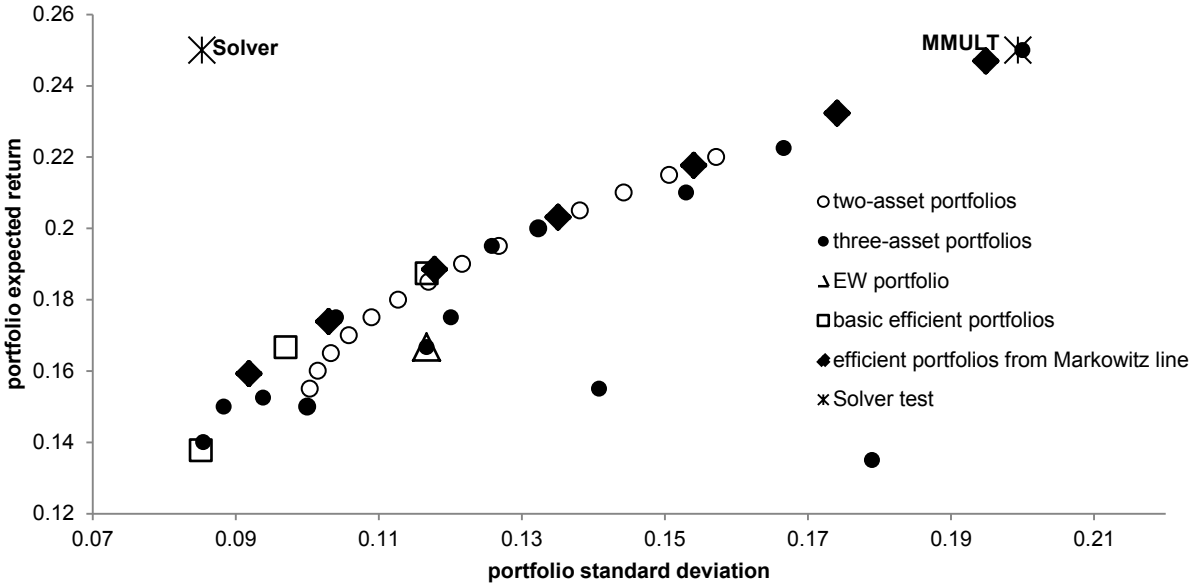
The table duplicates the procedures described in Carter, Dare, and Elliot (2002) ("Solver") and Arnold (2002) ("MMULT"). In panels (a), (b), and (c), respectively, the weight results are shown for the global minimum-variance portfolio, the efficient portfolio whose expected return matches the equally weighted, and the efficient portfolio whose variance matches the equally weighted. The lower panel gives the slope of a line implied by each set of weights in these three panels. Markowitz shows that efficient portfolios lie on a line in (weight$_1$, weight$_2$) space, so any pair of efficient weights will imply the same slope. However, as shown by the varying implied slopes from Solver, its results are not dependable. MMULT's results, however, are: each pair from its three portfolios implies the same slope.

With their efficient portfolios in hand, students can now verify Markowitz's efficient set. Using MMULT, students can quickly generate several efficient portfolios. Plotting those in (weight$_1$, weight$_2$) space they will find that they lie on a line ($R^2 = 1$), just as Markowitz said they would. (We have not illustrated this step in Figure 1, but instructors should be sure to ask their students to do this.) Next, they should use that line to generate additional portfolio weighting schemes. These new portfolios must also be efficient. Finally, as in Figure 1, they should plot these new portfolios in the standard (σ_p, E(R_p)) space—where they will fall on a perfect parabola, just as the two-asset portfolios did.

This is the big payoff: making the link between what they know (the parabola) and what Markowitz described (the line). Looking beyond the parabola to Markowitz's line makes students focus on what defines an efficient portfolio of specific assets: the weights chosen. The weights determine expected return and variance; variance does not determine expected return. The optimal weighting scheme for a given level of variance—the one that maximizes expected return—can be identified in (weight$_1$, weight$_2$)

space as the tangency between the given isovariance ellipse and the highest attainable isomean line. This tangency will lie on a line with all of the other efficient portfolios. We have just shown how a simple application of MMULT can help students find that line, and thus to find a simple way to identify other efficient portfolios. Students who wish to explore this further can go on to consider the isovariances and isomeans themselves.

Figure 1: Sequential Derivation of the Efficient Frontier



This figure presents the sequential derivation of the efficient frontier. (We have shown all of the steps in one figure, but instructors may prefer to have their students generate a series of graphs to underscore each step.) First, random two-and three-asset portfolios are plotted (circles). The two-asset portfolios lie on a parabola; the three-asset portfolios are scattered. We then add the global minimum-variance portfolio and the efficient portfolios that match the equally weighted three-asset portfolio on return and variance (open squares). The efficient portfolios found using Markowitz's linear relationship (in weight space) are then added (diamonds) These portfolios lie on a parabola that forms an envelope at the far left of the figure; this is the minimum-variance set. Finally, we add the results from a test of Excel's Solver optimizer and its MMULT function; note that the Solver solution lies outside the minimum-variance set.

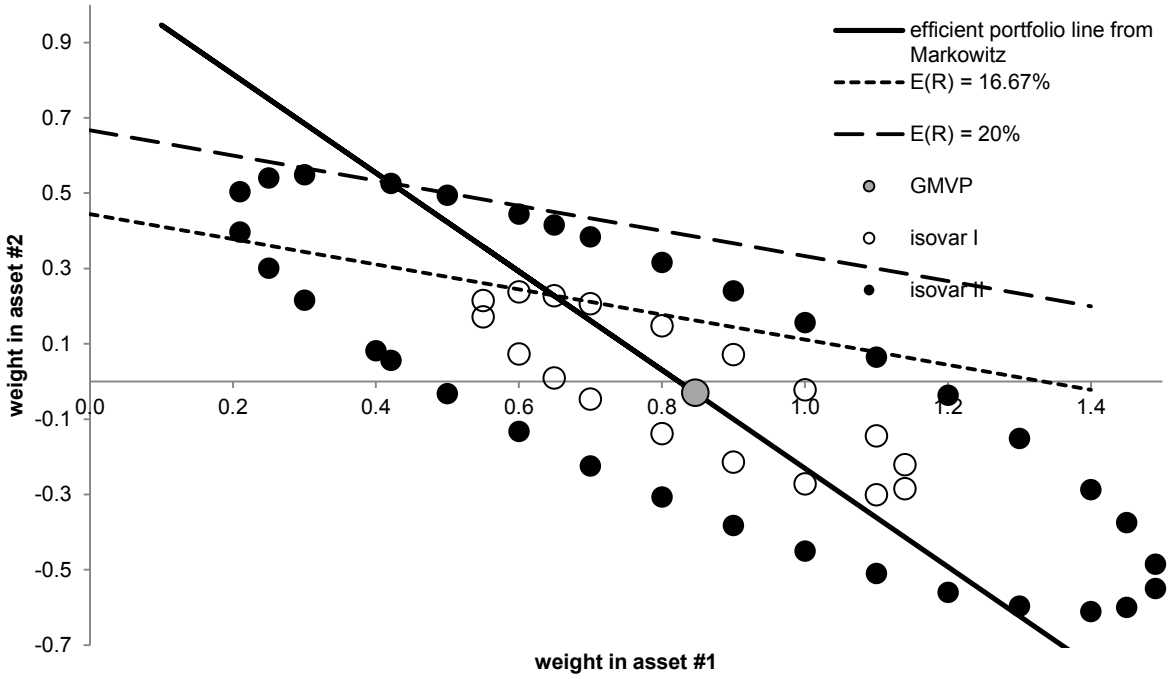
Isomeans and Isovariances

Students of economics are quite accustomed to finding an optimum as the tangency between one curve and another. Adding isomeans and isovariance curves to the linear weight relationship allows students to apply this approach to the portfolio problem and recreate Markowitz's Figure 2. Using Excel, this is not a difficult task.

Our Figure 2 below is an example of this sort of recreation. The red line depicts the weights shown earlier in Figure 1 (c) above. The large dark circle on this line, directly below the *x* axis, represents the weights for the global minimum-variance portfolio. This portfolio forms the center of the series of concentric isovariance ellipses, as we will see below.

Where: $E(R_i)$ is the expected return for asset i, and $E(R_p)$ is the expected return on the portfolio. Isomeans are therefore linear in ($weight_1$, $weight_2$) space. Students will find that isomeans plot as parallel lines, as in our Figure 2. In that plot, the portfolio returns implied by a given isomean get larger as one moves toward the northeast, but this is solely a function of the relative returns of the underlying assets. Students should find it informative to see isomeans that act differently (as in Markowitz's own Figures 2 and 3).

Figure 2: Combining Isomeans and Isoquants to Find Markowitz's Linear Efficient Set



This figure recreates Markowitz's Figure 2. It shows that efficient portfolios are identified as the tangencies between isomean lines and isovariance ellipses. The curve linking all of these tangencies is a line in (weight$_1$, weight$_2$) space.

Each point on the efficient set line is a tangency between an isomean and an isovariance. The isomeans link portfolios with a specified expected return. Markowitz gives the equation for isomeans for portfolios of three assets:

$$\text{weight}_2 = \frac{E(R_p)-E(R_3)}{E(R_2)-E(R_3)} - \frac{E(R_1)-E(R_3)}{E(R_2)-E(R_3)} * weight_1, \quad (1)$$

The equation for the isovariances—the curves linking portfolios with a specified variance—is more unwieldy, as variance terms are. We use the following simplifications, letting:

$a = \sigma_1^2 - 2\sigma_{13} + \sigma_3^2$
$b = \sigma_2^2 - 2\sigma_{23} + \sigma_3^2$
$c = \sigma_{12} - \sigma_{13} - \sigma_{23} + \sigma_3^2$
$d = \sigma_{13} - \sigma_3^2$
$e = \sigma_{23} - \sigma_3^2$

(so that the variance of the portfolio, V, is $w_1^2(a) + w_2^2(b) + 2w_1w_2(c) + 2w_1(d) + 2w_2(e) + \sigma_3^2$), and

$x = V - w_1^2(a) - 2w_1(d) - \sigma_3^2$
$z = 2w_1(c) + 2(e)$.

Now, a straightforward application of the quadratic formula gives us the weights for asset 2 for a given weight$_1$ and V, the target variance:

$$\text{weight}_2 = \frac{-z \pm \sqrt{z^2 - 4b(-x)}}{2b} \quad (2)$$

Using (2), students can generate isovariance ellipses easily. First, they can use MMULT to find the global minimum-variance portfolio; this forms the center of the concentric ellipses. The weight_1 value for this portfolio (which we will call w_{1MVP}) is therefore the starting point for their choices of weight_1 for each ellipse they plot. For a given variance, they then should choose a series of weight_1 values around w_{1MVP}. In choosing their weight_1 values, it is sufficient for them to add and subtract the following "radius" value from w_{1MVP}:

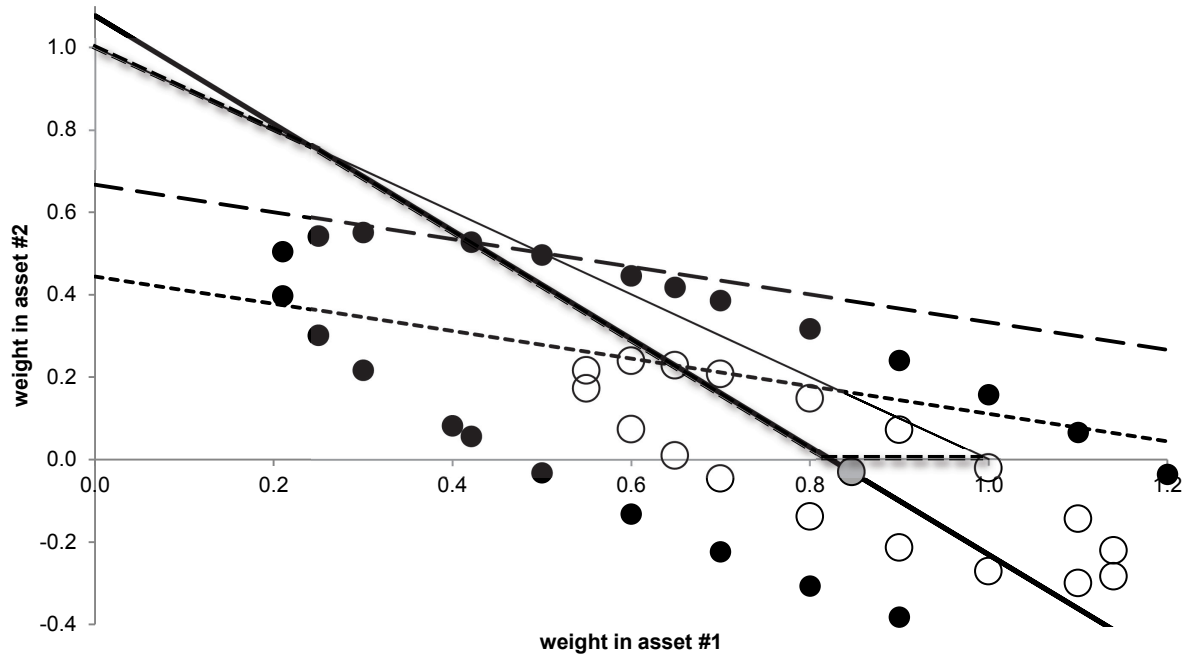
$$\text{radius} = \frac{(V - \sigma_3^2) + \frac{(2d)^2}{4a} + \frac{(2e)^2}{4b}}{a}. \quad (3)$$

(This radius is almost certainly too wide; Excel will therefore return an error message #NUM! for the weight_2 values corresponding to weight_1 values outside the ellipse. Students can just delete those weighting schemes.) Once they have determined the relevant weight_1 domain using (3), they should solve equation (2) twice for each relevant weight_1: once by adding the radical term in the numerator, and once by subtracting it. This will give them their weight_2 values, and they are ready to plot.

Our Figure 2 plots two isovariance ellipses. "Isovar I" shows portfolios whose variance equals that of the "variance-matched" portfolio ($\sigma_p = \sigma_{EW}$). This isovariance ellipse is tangent to the 16.67% isomean exactly where is should be: at the point previously identified by Markowitz's efficient-set line. Similarly, "isovar II" (portfolios with the same variance as the efficient portfolio whose E(R) = 25%) is tangent to the 25% isomean at the point where that isomean intersects on the efficient-set line. Now students can see that Markowitz's efficient-set line is simply marking the tangencies of the isovariances and isomeans. Microeconomics students have seen relationships like this before (for example, an individual's demand curve simply marks the points of tangency—albeit on different axes—between her indifference curves and her income constraint, as the latter rotates around its *y* intercept to illustrate new prices for the *x* good). Plotting these tangencies reinforces students' appreciation for efficiency.

They can then take one last step. Markowitz did not allow short sales. Since he required nonnegative weights, all acceptable portfolio weighting schemes had to fall within a triangular boundary: from the origin to (1,0) and (0,1) along the *x* and *y* axes, respectively, with a hypotenuse from (1, 0) to (0,1). (Portfolios identified by points along the boundary assign a weight of 0 to one of the three assets.) This boundary is marked by a bold black line in Figure 3, which also reproduces the curves from Figure 2. Note that the efficient-set line lies inside the triangular boundary for the most part, but does extend outside it. Thus, just as Markowitz did in his Figures 2 and 3, we must depart from efficiency when the efficient outcomes lie outside the allowed boundary. In our example, the resulting revised efficient set is kinked twice: it follows the hypotenuse from (0, 1) until it meets the true efficient set line; it then follows the efficient set line down to the *x* axis, after which it track the *x* axis to (1, 0). Reevaluating their efficient sets in light of Markowitz's short-selling constraints helps students appreciate the techniques of Johnson and Liu (2005) on their portfolio project. It also clarifies the assumptions underlying Sharpe's Capital Asset Pricing Model, to which we turn next.

Figure 3: Prohibiting Short Sales Creates a Kinked Efficient Set



In this figure, we trace out the efficient set, given Markowitz's short-selling constraints. Portfolio weights must lie within the triangle defined by the x and y axes and the line from (0,1) to (1,0). The efficient set is therefore kinked in our example. It first follows the hypotenuse of the boundary triangle from the y axis at (0,1) until it hits the efficient set; it then follows the efficient set down to the x axis, moving through the triangle of allowable weights; it then follows the x axis to the point (1,0).

PROJECT ADDITIONS FROM SHARPE

Students often leave their basic finance courses thinking that the Capital Asset Pricing Model (CAPM) *is* the equation for the Security Market Line: $E(R_i) = r_f + \beta_i*[E(R_M) - r_f]$ (where β_i is the systematic risk of asset i, r_f is the return on the riskless asset, and $E(R_M)$ is the expected return on the market benchmark). However—given unlimited borrowing or lending at a risk-free rate, homogeneous expectations, and no market frictions, among other assumptions—the economic insight of the CAPM is that the market portfolio is efficient. If the benchmark is efficient, the relationship between beta and expected return *must* be linear. "…[W]e may arbitrarily select *any* one of the efficient combinations, then measure the predicted responsiveness of *every* asset's rate of return to that of the combination selected; and these coefficients will be related to the expected rates of return of the assets in exactly the manner pictured"—a line (Sharpe, 1964; emphasis original). Roll (1977), in his famous critique of tests of the CAPM, puts it this way:

> There is an 'if and only if' relation between return/beta linearity and market portfolio mean-variance efficiency…In *any* sample of observations on individual returns…there will always be an infinite number of ex-post mean-variance efficient portfolios. For each one, the sample 'betas' calculated between it and individual assets will be exactly linearly related to the individual sample mean returns. In other words, if the betas are calculated against such a portfolio, they will satisfy the linearity relation *exactly* whether or not the true market portfolio is mean-variance efficient. (emphasis original)

Using Excel, students can easily prove that beta/return linearity is a consequence of the efficiency of the "market." We present a simple exercise in Table 2. We start with price data for three assets, Harley

Davidson stock (HOG), Ford stock (F), and the S&P 500 market index. We then found the daily returns, averages, sample standard deviations, and covariances. Doing these sorts of calculations is standard for basic investments spreadsheet projects.

Given the covariances, we used Excel's MMULT function to solve for the efficient portfolio that has the same expected return as the equally weighted portfolio (a "return-matched" portfolio, where $E(R_p)$ = 0.3591% in this example). These weights were -.0822, -.2492, and 1.3314 for HOG, F, and S&P, respectively. We used these weights to create portfolio P, as shown in Table 2. Finally, we calculated "betas" using both the S&P500 and efficient portfolio P as benchmarks (so, for example, the "beta with S&P" for HOG is cov(HOG, S&P)/var(S&P)). We repeated this process using Solver to identify the efficient portfolio (w_{HOG} = .0956, w_F = 0, $w_{S\&P}$ = .9044). We plot the results in Figure 4.

The beta/return relationships based on the S&P500 and Solver's "efficient" portfolio are decidedly nonlinear. Early empirical results like this seemed inconsistent with the CAPM. However, as Roll argued, the CAPM is an ex ante model, and testing the beta/return relationship using an arbitrary benchmark using ex post data could not be expected to result in the linearity implied by the theory. On the other hand, if it is linearity that we want, we can always find it—as long as we are careful to choose a benchmark that we know if efficient. Since P was efficient, using it as the benchmark did lead to a linear beta/return relationship—a perfect one, just as is implied by the mathematics of "efficiency."

Table 2: Example of a Simple "Security Market Line" Exercise

Weight in Efficient Portfolio, P:	**-0.0822**		**-0.2492**		**1.331**		
	HOG		**F**		**S&P**		**P**
DATE	**price**	**return**	**price**	**return**	**price**	**return**	**return**
16-Mar-12	$49.39	0.0012	$12.51	-0.0302	1,404	0.0011	0.0089
15-Mar-12	$49.33	-0.0086	$12.90	0.0016	1,403	0.0060	0.0083
14-Mar-12	$49.76	0.0081	$12.88	0.0142	1,394	-0.0012	-0.0058
13-Mar-12	$49.36	0.0260	$12.70	0.0217	1,396	0.0181	0.0166
12-Mar-12	$48.11	0.0262	$12.43	-0.0119	1,371	0.0002	0.0010
9-Mar-12	$46.88	0.0198	$12.58	0.0096	1,371	0.0036	0.0008
8-Mar-12	$45.97	0.0081	$12.46	0.0180	1,366	0.0098	0.0079
7-Mar-12	$45.60	0.0106	$12.24	0.0124	1,353	0.0069	0.0052
6-Mar-12	$45.12	-0.0293	$12.09	-0.0297	1,343	-0.0154	-0.0107
5-Mar-12	$46.48		$12.46		1,364		
Mean:		0.0069		0.0006		0.0032	0.0036
Sample Standard Deviation:		0.0177		0.0199		0.0091	0.0083
Beta With S&P:		1.334		1.630		1.000	0.815
Beta With Efficient Portfolio, P:		1.053		0.953		0.994	1.000

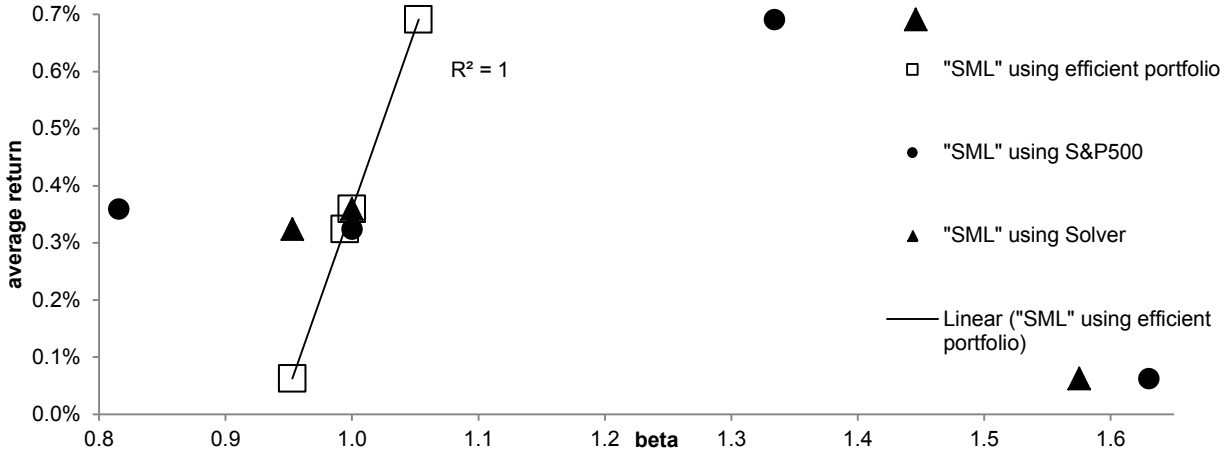
	HOG	**F**	**S&P**	**P**
HOG	0.0003			
F	0.0002	0.0004		
S&P	0.0001	0.0001	0.0001	
P	0.0001	0.0001	0.0001	0.0001

The data in Table 2 were used to create the beta/return relationship graphed in Figure 4. Price data is from Yahoo! Finance. The individual assets' summary statistics are listed below their daily returns; covariances are presented in the matrix at the bottom of the table.

CONCLUDING COMMENTS

Using a spreadsheet project in investments courses has become almost a given. However, while these projects harness the power of Excel to perform basic calculations on real data, they have not yet exploited it to explore the theoretical underpinnings of portfolio theory. In this paper, we show several straightforward investments applications of Excel's matrix multiplication functions (following Arnold, 2002). Students will not only learn a valuable Excel tool (and the potential problems with its Solver optimizer), but will also become much more familiar with portfolio mathematics.

Figure 4: The Ex Post "Efficient Set"



This figure demonstrates the equivalence between an efficient benchmark and a linear return/beta relationship. Using ex post data, inefficient benchmarks (here, both the S&P500 and the portfolio identified by Solver) give return/beta relationships that are nonlinear. However, an efficient benchmark—always available ex post—will lead to a linear relationship, as demonstrated by the trend line.

Markowitz's (1952) figures look daunting, but students—once they get past their fear—find them extremely helpful. Being able to recreate the graphs in Excel demystifies them. Using MMULT allows students to identify efficient portfolios, which is more than half the battle. Given a few efficient weighting schemes, students can verify that the optimal portfolios—the tangencies between the isomean lines and the isovariances ellipses—lie along a line in ($weight_1$, $weight_2$) space. This is surprising for students, who are accustomed to the traditional parabolic representation. Using the linear relationship they find, they can work back to that parabola by finding more efficient portfolios from the line, then replotting them in (σ_p, $E(R_p)$) space. This is the big payoff: linking Markowitz's line directly to the traditional parabola.

We can also use Excel to work through some issues with the Capital Asset Pricing Model. Most importantly, we can demonstrate part of Roll's critique of the CAPM: that the linearity of the beta/return relationship does not prove Sharpe's theory, but is simply a mathematical consequence of the efficiency of the benchmark portfolio. Students can prove this by using MMULT to identify an ex-post efficient portfolio from data they choose on their own, then using that portfolio as the benchmark for beta calculations. Their beta/return relationship *will* be linear—just as Roll said. Students will then be in a much better position to distinguish the ex-ante nature of the economic contribution of the CAPM—that the market portfolio is efficient—from the ex post consequence of efficiency, and they will be better able to evaluate the empirical tests of the CAPM. They will also become immune from the error of equating the SML equation with the CAPM theory.

Markowitz's and Sharpe's theories involve abstruse and complex applications of portfolio mathematics—much more technical knowledge than a professor would expect in an introductory investments class. Traditional textbooks therefore gloss over this background, and present the theories in an easily digestible way. However, it is no longer necessary to avoid the foundations. Using Excel, students can use efficient portfolios to guide their study of the Modern Portfolio Theory and the Capital Asset Pricing Model, without having to understand quadratic programming. Adding this explicit consideration of the consequences of efficiency—with a simple application of MMULT—will enhance significantly students' appreciation for investments.

APPENDIX: USING MMULT

Arnold (2002) describes a relatively easy way to generate efficient portfolios using Excel's matrix multiplication functions. To find the global minimum-variance portfolio, the expression is:

=MMULT(MINVERSE(MINCOV),L)

where MINCOV is Arnold's name for an (n+1)x(n+1) matrix created by surrounding the covariance matrix with a row and column comprised of 1s (except for a 0 in the bottom right cell), and L is an (n+1)x1 vector with 0s in very cell but the bottom one (which has a 1). Once the two input matrices are created, follow Arnold's three-step process:

1. Highlight (n+1) cells in a column (these cells will hold the n minimum-variance weights in its top n rows; the bottom cell holds the Lagrange multiplier term).
2. Type in the equation above, entering the matrix ranges for MINCOV and L.
3. Simultaneously hit Control-Shift-Enter.

Beware: Failing to highlight (n+1) cells (just typing into one cell) and/or hitting only Enter will result in only the weight for the first asset.

The global minimum-variance weights for the example in the current paper were found as follows:

MINCOV				L	weights
0.01	0.01	-0.005	1	0	**0.84694**
0.01	0.04	0	1	0	**-0.03061**
-0.005	0	0.0625	1	0	**0.18367**
1	1	1	0	1	-0.0072

To find the efficient weights for a portfolio with a specified expected return, add another row and column to the MINCOV matrix (which will now be (n+2)x(n+2)); the first n cells on the new row, and the first n rows of the new column, contain the portfolio assets' expected returns. (The remaining cells hold 0s.) Arnold calls this matrix EFFCOV. To the vector L, add a new cell at the bottom, containing the target expected return; call this K. Now, proceed as before, but highlight (n+2) cells for the result vector. The desired weights will again be in the top n rows of this vector. The example below illustrates the process for the efficient portfolio that has the same expected return as the equally weighted portfolio (16.67%).

Creating the EFFCOV/K matrices makes generating efficient portfolios extremely easy: simply changing the target expected return—the bottom cell in the K matrix—automatically generates the new weights. This is much easier than the iteration process using Solver that Bodie, Kane, and Marcus (2011) advocate.

EFFCOV						K		weights
0.01	0.01	-0.005	1	0.15		0		**0.64912**
0.01	0.04	0	1	0.25		0		**0.22807**
-0.005	0	0.0625	1	0.10		0		**0.12281**
1	1	1	0	0		1		0.00303
0.15	0.25	0.10	0	0		0.1667		-0.0746

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BIOGRAPHY

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MANAGEMENT SKILLS DESIRED BY BUSINESS SCHOOL DEANS AND EMPLOYERS: AN EMPIRICAL INVESTIGATION

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ABSTRACT

The objective of this research was to determine the skills business leaders find most critical in MBA programs to adequately prepare leaders and professionals for organizational success. A second goal was to explore the relationship between the perceptions of business and industry leaders and business school leaders on the rankings of skills deemed most important to prepare students for success in their business careers. The conceptual framework for this study was based on Tanyel's et al., 1999 study. A survey instrument was administered to 67 respondents from prospective employers of MBA graduates and 15 respondents among business school deans and directors located in the state of Michigan. The two samples consisted of a matched pair design and rank order means for skill rating by the prospective employers and the matched mean rating from the deans/ directors. The major findings found significant differences in the mean rating of the importance of "soft skills" vs. "hard skills" among the prospective employers of MBA graduates. Additionally that there is a significant difference in the mean rating of the importance of "soft skills" vs. "hard skills" for MBA graduates among the deans and directors at business schools with MBAs. This research offers business school leaders empirical evidence for curriculum redesign for prioritizing skills and designing coursework to incorporate top ranked skills viewed as most important by business and industry leaders.

JEL: J24, J33, J44, M12

KEYWORDS: Higher Education, MBA Programs, Management Skills, Soft Skills

INTRODUCTION

Business degrees, considered prestigious in the early l980s, declined in prestige beginning in the l990s due to the lack of perceived effectiveness of MBA programs (Allen, 1998; Hahs, l999; Oblinger, 1998; Storey, 1997). With the events that followed September 11, 2001 coupled with the U.S. recession of 2008, business degrees continue to face a downward spiral. Employers criticized business schools and business graduates as generally unable to transfer content knowledge to real situations in a fast-paced global work place (Ainsworth & Morley, l995; Carter, Goodrum, Saito, & Naugle, l999; Dudley, l990; Fisher, l994; Saito, l994; and Voght & Schaub, l992). Business educators appear to be equally disgruntled. In an archived article sourced from AACSB, Greenburm (2006) notes the criticisms of leading business educators:

> *It appears that industry and academia are in agreement that business programs require dramatic changes to the curriculum that is aligned with the needs of the new global workforce. The case for making business programs more desirable has never been so critical. And, business schools need to quickly get on board with deep changes to their curriculums to avoid further declines.*

Research is needed to determine whether business schools are addressing the criticisms and preparing their students with the skills demanded by the corporations that hire their graduates. If business schools and corporations work together, their efforts could result in improved MBA programs. The remainder of

this paper will provide a literature review, methodology, results & discussion, and conclude with findings and results.

LITERATURE REVIEW

Business is changing. As business changes, what it needs from employees will shift. Most of all, business needs people who will enter the workplace ready to make a solid contribution but who will also be effective in the future. Leaders will be required who can anticipate and lead change. Graduates of higher education will need to be flexible, adaptable, and in possession of a mix of broad education and specific skills. Communication, interpersonal skills, problem solving, decision-making, and teamwork are the competencies that will allow employees to grow and adapt as the world of work continues to change (Oblinger, 1998).While there are numerous explanations for the change in criteria for workplace skills, the impact of globalization appears to be one of the most significant causes that appear in many analyses (Rhinesmith, l996; Williams, l996). In response to increased global competition and the expansion of the world economy, businesses are seeking workers more highly skilled in the soft skills (Caudron, l999; Solomon, l999; Himmelsbach, l999).

As global issues become ever more important, over the last few years the criticism has emerged that American MBA programs are not international enough, either in the number and variety of international business courses, or in the qualifications of those who teach them (Ball & McCulloch, l993; Beamish & Calof, l989; Muuka, Harrison, & Hassan, l999). Streisand (l995) writes that America's colleges and universities are often accused of having little in common with the real world, and Eberhardt, Moser, & McGee (l997) state that recently many articles have appeared, noting "an apparent gap between the skills and abilities of business graduates and the needs of U.S. businesses." Tanyel and et. al. (l999) state that "the business environment changes faster than curricula at colleges and universities because of the cumbersome process often involved in curriculum revision, including political posturing by operating entities and conflicting educational philosophies among faculty."

According to Neelankavil, (1994):

> *Graduate business schools must take a careful look at their programs to prepare MBAs to face challenges of the changing business environment. Some specific criticisms of graduate business programs are: 1. Many MBA programs focus on technical skills to the exclusion of communication skills. 2. MBA programs do not teach their graduates leadership, creativity and entrepreneurship. 3. MBA programs ignore the importance of teamwork. 4. MBA programs lack integration and a global perspective. To raise the quality of MBAs, schools need to cover material relevant to client firms and incorporate new materials into existing courses that stress written and oral communication. Faculty and executives should forge links to evaluate graduates and update classroom material. Faculty should be encouraged to undertake business internships. Corporations must identify MBAs with potential for senior level management and train them, focusing on leadership negotiating skills and long-term planning.*

Skills for The Organization – What Business Firms Require

Both academics and employers complain that college graduation requirements, based primarily on passing sets of courses, fail to ensure that the graduate has the personal qualities and skills needed to succeed in graduate school, professional training, or in the workplace (Oblinger, et. al. 1998). These skills include initiative, persistence, integrity, the ability to communicate effectively, to think creatively as well as critically, and to work with others to solve problems (Oblinger, et al. 1998). Also required are

those skills involving interaction among people such as interpersonal skills, teamwork, and communication skills (Harvey et al. 1997).

"Many educators will claim that our colleges already provide just such preparation. But if we listen to those who employ our graduates or to educators in graduate and professional schools, we hear that an enormous chasm exists between what higher education claims it is doing and what is actually achieved" (Lavenberg, 1997, A64). Many industries and large corporations are dismissing employees who hold MBAs or replacing them with technical people who do not necessarily have an MBA degree (Yucelt, l998). Yucelt contends that part of the blame lies with business schools for choosing to teach what they want instead of what business firms need. Therefore, in the U.S., demand for the MBA is declining, and business schools are facing the toughest challenge regarding increased tuition, programs content, quality and teaching skill (Yucelt, 1998). According to Harvey & Knight (1996),

> *Employers are not looking for trainees when they employ graduates but people equipped to learn and deal with change. Employers want graduates who are adaptable and flexible, who can communicate well and relate to a wide range of people, who are aware of, but not indoctrinated into, the world of work and the culture of organizations, and who, most importantly, have inquiring minds, are willing and quick to learn, are critical, can synthesize and are innovative.*

Mardeusz (1995) suggests that over the last three decades little change has been made in university curricula with respect to advanced degrees in Business Administration. In l986, the American Assembly of Collegiate Schools of Business (AACSB) reported that business schools fail to provide students with the tools and perspectives that are needed to build foundations for successful contributions as employees and leaders in business. Since that time, traditional MBA programs have been criticized for excessive focus on quantitative and technical skills and too little attention to such soft skills as interpersonal, communications, teamwork and people skills (Colvin, l997; Eberhardt et al., l997; Hahs, l999; Nicastro and Jones, l994; Nowak et al., l996; Oblinger, l998; O'Reilly, l994; Pearce, l999; Tanyel et al., l999; Tomlinson, l999; Wardrope & Bayless, l999; Whettingsteel, l999; Zolner, l996).

Soft Skills

Contrary to popular belief, soft skills do make a difference in the business world (Workforce, 1999). Although managers still need typical techniques taught in MBA programs, they need additional tools to be effective. Today's managers need a variety of soft skills in communication, negotiation, and team building to effectively manage technological change and corporate stress resulting from downsizing and rapid growth (Deverell, 1994).According to a study of what corporations seek when they hire MBAs, the three most desired capabilities are communication skills, interpersonal skills and initiative-all of which are elements of emotional intelligence (Caudron, 1999). In a recent study of 1,400 CIOs in the United States, RHI Consulting Inc. found that twenty-seven percent of CIOs said interpersonal skills are the most important factor for reaching management levels in the IT field (Solomon, 1999).

In 1995, Daniel Goleman, a psychologist and former New York Times reporter, published the international best seller, Emotional Intelligence: Why It Can Matter More Than IQ (Bantam Books, 1995). In it, he brought together years of research to show that emotional intelligence-which can loosely be described as "a person's ability to manage his or herself and relate to other people"-matters twice as much as IQ or technical skills in job success (Caudron, 1999). In a follow up book: Working with Emotional Intelligence (Bantam Books, 1998), Goleman revealed data from studies in more than 500 organizations that proved factors such as self-confidence, self-awareness, self-control, commitment and integrity not only create more successful employees, but also more successful companies (Caudron, 1999).Caudron (1999) states that, "as a result of Goleman's research and all the publicity generated by his

best sellers, employers do appear to be more willing to invest in soft-skills development, especially at the higher management levels." A study of 1,171 U.S. Air Force recruiters showing that the best performing recruiters were those who scored high on assertiveness, empathy, interpersonal relations, problem solving and optimism (Caudron, 1999). Mariotti (1998) contends that MBA programs in the U.S. are the best in the world. Still, there is an aspect of business they teach poorly or not at all—'soft management.' Teaching the 'hard' stuff—technology, financial analysis, and workflow—is the easy part. These topics yield to logic and analysis. The 'soft' stuff is the hard part. The MBA programs should teach these concepts, but only the best ones are beginning to do so.

METHODOLOGY

Data Collection

The data was collected and analyzed in 2001 to determine the relative importance of each of the skills/attributes to both the organizations and business schools. The skills tested for this study came out of Tanyel et al. (l988) study and was used with permission from the authors. The organizations identified for the employer survey through the Dun and Bradstreet database had a contact person within the organization. However, the cover letter included with the instrument was sent to the Vice President of Human Resources. A return, prepaid envelope was included with the cover letter and survey. A return rate of 10% was anticipated, since the interest in the subject was expected to be high among corporations contacted. For the university survey, the author contacted either the Director of the MBA program, an Associate Dean, or the Dean, and read the appropriate sections of the survey to the respondent. The goal of this study was to determine whether or not business leaders believe MBA programs adequately prepare students in business skills. A second goal was to explore the relationship between the perceptions of business managers and business school leaders on how well MBA programs prepare students in the skills that organizations seek.

Design

The research population for this study consisted of human resource managers from companies throughout the state of Michigan. The second population consisted of Deans or Associate Deans of Michigan business schools. The same survey instrument was used for both populations. However, certain sections of the survey were left out for the deans/directors since the questions did not apply to them. The survey consisted of 16 managerial skills/attributes that the respondents were asked to rate on a scale from 1 (less important) to 5 (very important). The author used a five point Likert-type questionnaire designed for organizations that hire MBA graduates. A total of 2,000 surveys were mailed out to employers and 21 universities with MBA programs were contacted by telephone. A total of 78 surveys were received. However, 67 surveys were used since the rest indicated that they do not hire students with MBAs. A total of 15 deans and associate deans responded to the telephone survey.

This study had a response rate of 3.4% from the employers and a 75% response rate from the deans or associate deans of MBA programs. The reason for the low response rate from the employers was that many of the managers we contacted by telephone indicated that they did not hire MBA graduates. Therefore, the questionnaire did not apply to their firms. The data was manually entered into SPSS 9.0 for Windows for statistical analysis. The 16 items from the survey were originally used in the study by Porter & McCibbin (1988) and later used by other researchers such as Ferketich (1998); Tanyel et al. (1998); and Levenburg (1996). Subjects were asked to rate the 16 attributes/skills on a scale of 5 (very important) to 1 (less important) that they desire of their newly hired college graduates. They were also asked to circle yes or no if their graduates demonstrate these skills.

Construct Validity and Reliability

To determine the reliability and validity of the instrument, the researcher pretested the instrument with selected human resource professionals before mailing it to the selected groups for their study. As this questionnaire was successfully tested and utilized by Tanyel et al. (1998), it can be assumed to meet the requirements for construct validity. Literature on business skills and MBA knowledge constituted the body of literature used in the development of the questionnaire for this study. Principal writers in these areas included: Ferketich (1998); Levenburg (1996); (Porter & McKibbin (1988); and Tanyel et al. (1998).

RESULTS AND DISCUSSIONS

Test of Hypothesis One

Hypothesis HO1 states that there is no significant difference in the mean rating of the importance of "soft skills" vs. "hard skills" among the prospective employers of MBA graduates. All respondents were asked to rate the importance of 16 different skills. Of the 78 employers surveyed, 11 indicated that they did not hire MBA graduates. Each of the remaining 67 respondents rated both the hard and soft skills, so the t-test for Paired Samples was appropriately used.

Table 1: T-test for Paired Samples

		Paired Differences Mean	t	df	Significance (2-tailed)
Pair 1	Soft –Hard	0.637	11.578	66	0.000

Hypothesis HO1 states there is no significant difference in the mean rating of the importance of "soft skills" vs. "hard skills" among the prospective employers of MBA graduates. All respondents were asked to rate the importance of 16 different skills. Of the 78 employers surveyed, 11 indicated that they did not hire MBA graduates. Each of the remaining 67 respondents rated both the hard and soft skills, so the t-test for Paired Samples was appropriately used.

Table 2 summarizes the results of the means and standard deviations of soft skills and hard skills for human resource managers. The rankings on the critical managerial skills to the organization are displayed in Table 3.

Table 2: Mean and Standard Deviation of Soft and Hard Skills for Human Resource Managers

	N	Minimum	Maximum	Mean	Std. Deviation
SOFT	67	3.44	5.00	4.5696	0.4005
Valid N (listwise)	67				
HARD	67	2.43	5.00	3.9328	0.5847
Valid N (listwise)	67				

Respondent type =1.00 With the mean rating for soft skills being 4.57 and the mean rating for hard skills being 3.93, the resulting p-value of 0.000 was less than the established significance level of 0.05. As a result, the null hypothesis is rejected and it can be concluded that there is a significant difference in the mean rating of the importance of "soft skills" vs. "hard skills" among the prospective employers of MBA graduates.

Table 3: Rank Ordered Means for Critical Managerial Skills to the Organization According to Human Resource Managers

Rank Order		Variable	Mean	SD
1	SS	Responsibility & Accountability	4.82	.46
2	SS	Interpersonal Skills	4.71	.55
3 or 4	SS	Oral Communication	4.67	.54
3 or 4	SS	Teamwork	4.67	.56
5	SS	Ethical Values	4.61	.68
6	SS	Decision Making & Analytical Skills	4.60	.61
7	SS	Creativity & Critical Thinking	4.45	.64
8	HS	Written Communication	4.44	.79
9	HS	Time Management	4.42	.72
10	HS	Project Management	4.21	.88
11	SS	Persuasiveness and Influence	3.98	.92
12	HS	Presentation Skills	3.96	.89
13	HS	Assimilate new Technologies	3.90	.83
14	HS	Computer Problem Solving Experiences	3.83	.96
15	HS	Computer/Word Processing Skills	3.70	.94
16S	HS	Global/International Business Skills	3.15	1.32

N=67 Note: SS indicates Soft Skill and HS indicates Hard Skill. The top seven skills desired by prospective employers (in order of importance) are responsibility and accountability, interpersonal skills, oral communication, teamwork, ethical values, decision-making and analytical skills, and creativity and critical thinking. The average mean for soft skills (SS) among the prospective employers was 4.57 (on a 5 point scale), indicating that human resource managers determine that these skills are highly essential to the organization. The soft skills were all ranked in the top half of the critical managerial skills list. The hard skills (HS), written communication, time management, project management, presentation skills, ability to assimilate new technologies, computer skills and global/international business skills were all ranked in the lower half of the list. The average Mean for hard skills (HS) among human resource managers was 3.93 (on a 5 point scale) indicating that prospective employers desire soft skills over hard skills. The skill/ability believed to be most important by Deans/Directors of MBA programs was oral communication. The skill/ability ranked lowest on the list of critical managerial skills among deans/directors was global/international business skills.

Test of Hypothesis Two

Hypothesis HO2 states that there is no significant difference in the mean rating of the importance of "soft skills" vs. "hard skills" for MBA graduates among the business school deans and directors with MBAs.

Table 4 summarizes the results of the t-test for paired samples.

Table 4: T-test for Paired Samples (Hypothesis Two)

		Paired Differences Mean	t	df	Significance (2-tailed)
Pair 1	Soft-Hard	0.333	2.794	14	0.014

Hypothesis HO2 states there is no significant difference in the mean rating of the importance of "soft skills" vs. "hard skills" among the deans or associate deans of business schools. All respondents were asked to rate the importance of 16 different skills. Each of the 15 respondents rated both the hard and soft skills so the t-test for Paired Samples was appropriately used.

Table 5 summarizes the means and standard deviations for soft and hard skills for deans of MBA programs.

Table 5 Mean and Standard Deviation of Soft and Hard Skills for Deans of Business Schools

	N	Minimum	Maximum	Mean	Std. Deviation
SOFT	15	3.00	4.89	4.2917	0.4823
Valid N (listwise)	15				
HARD	15	2.86	4.57	3.9583	0.5175
Valid N (listwise)	15				

Resp_type =2.00 *With the mean rating for soft skills being 4.29 and the mean rating for hard skills being 3.96, the resulting p-value of 0 .014 was less than the established significance level of 0.05. As a result, the null hypothesis is rejected and it can be concluded that there is a significant difference in the mean rating of the importance of "soft skills" vs. "hard skills" for MBA graduates among the deans and directors at business schools with MBA programs.*

The ranking of deans on the critical managerial skills to the organization are displayed in Table 6. The rank ordering, means, and standard deviations of the hard and soft skills are displayed.

Table 6: Rank Ordered Means of the Critical Managerial Skills to the Organization According to Deans of Business Schools

Rank Order		Variable	Mean	SD
1, 2 or 3	SS	Oral Communication	4.67	.62
1, 2 or 3	HS	Written Communication	4.67	.62
1,2, or 3	SS	Responsibility & Accountability	4.67	.51
4 or 5	SS	Interpersonal Skills	4.60	.63
4 or 5	SS	Decision Making & Analytical Skills	4.60	.83
6	SS	Teamwork	4.33	.62
7	SS	Creativity and Critical Thinking Skills	4.27	.70
8	HS	Presentation Skills	4.13	.83
9 or 10	HS	Time Management	4.07	.80
9 or 10	SS	Ethical Values	4.07	.70
11	HS	Computer Problem-Solving Experiences	4.00	.93
12	HS	Computer/Word Processing Skills	3.93	.88
13	HS	Ability to Assimilate New Technologies	3.80	.86
14	HS	Project Management	3.73	.88
15 or 16	SS	Persuasion and Influence	3.33	.90
15 or 16	HS	Global/International Business Skills	3.33	1.11

N=15 Note: SS indicates soft skill and HS indicates hard skill. According to the business schools deans/directors of MBA programs, the top seven critical skills/abilities to the organization are oral communication, written communication, interpersonal skills, decision-making, responsibility and accountability, ability to work in teams, and creativity and critical thinking skills. Six of the seven skills are soft skills. The average Mean of soft skills for deans/directors was 4.29 and the average Mean of hard skills 3.96. The results indicate that soft skills are rated higher than hard skills among business school deans/directors of MBA programs.

Test of Hypothesis Three

Hypothesis HO3 states that there is no significant difference in the mean rating of the importance of each skill for MBA graduates among the prospective employers vs. the business school deans and directors. The 67 respondents from the prospective employers rated each of the soft and hard skills, as did the 15 respondents among the deans and directors. The mean rating among the soft and hard skills for the two groups were compared. Utilizing the Levine test, there is support for equal variances. Hence, for the soft skills, the t-test for Independent Samples had a p-value of 0.015 when the Equality of Variances assumption was used; as a result, the null hypothesis is rejected and it can be concluded that there is a significant difference in the importance of soft skills as rated by the prospective employers of MBA graduates vs. the business school deans and directors. For the hard skills, the t-test for Independent Samples had a p-value of 0.874 when the Equality of Variances assumption was used. As a result, the null hypothesis is not rejected and there is insufficient evidence to conclude a significant difference in the importance of hard skills as rated by the prospective employers of MBA graduates vs. the business school deans and directors.

Table 7: T-Test for Equality of Means for Independent Samples (Hypothesis Three)

	t	Df	Significance (2-tailed)	Mean Difference
Soft Skills (Equal Variances)	-2.49	80	0.015	-0.278
Hard Skills (Equal Variances)	0.16	80	0.874	0.026

Utilizing the Levine test, there is support for equal variances. Hence, for the soft skills, the t-test for Independent Samples had a p-value of 0.015 when the Equality of Variances assumption was used; as a result, the null hypothesis is rejected and it can be concluded that there is a significant difference in the importance of soft skills as rated by the prospective employers of MBA graduates vs. the university deans and directors. For the hard skills, the t-test for Independent Samples had a p-value of 0.874 when the Equality of Variances assumption was used.

FINDINGS

The goal of this study was to determine whether or not business leaders believe business schools adequately prepare MBA students in business skills. With the rapid changes in new technology and the existence of global economies, business needs people who can deal with change and uncertainty. A second goal was to explore the relationship between the perceptions of business managers and business school deans on how well MBA programs prepare students in the skills organizations seek.

The research population for this study consisted of human resources managers from companies throughout the state of Michigan, USA. The second population consisted of business school deans, associate deans, or MBA program directors. The same survey instrument was administered to both populations. Certain sections of the survey were eliminated for the deans since the questions did not apply to them.

Using the existing literature as the starting point, Tanyel et al. (1998) developed a self-administered questionnaire to identify the skill set believed necessary for today's business school graduates to contribute effectively to an organization upon graduation. The survey consisted of 16 managerial skills/attributes that the respondents were asked to rate on a scale from 5 (very important) to 1 (less important). The 16 items from the survey were originally used in the study by Porter & McCibbin (1988).

From the 2000 surveys that were mailed out, a total of 78 surveys were used for the data analysis. The study had a 78% response rate from the deans and 3.4% from the employers. The data was manually entered into SPSS 9.0 for Windows for statistical analysis. The data was collected and analyzed to determine the relative importance of each of the skills/attributes to both the organizations and business schools.

The questions investigated in this study included the following: (1) what are the most important managerial skills to the organization, as identified by business managers? (2) what are the most important managerial skills to the organization, as identified by business schools deans/directors? And (3), is there a difference between how business managers and business schools deans and MBA programs directors rate managerial skill?

According to the prospective employer respondents, the most important skills to be obtained by graduates are (in order of importance) responsibility and accountability, interpersonal skills, oral communication, teamwork, ethical values, decision-making and analytical skills, and creativity and critical thinking. Those attributes believed to be less important included written communication, time and project management, persuasive ability, presentation skills, ability to assimilate new technologies, computer skills, and global awareness. According to the business school deans/directors of MBA programs, the most important skills are (in order of importance) oral communication, written communication, interpersonal skills, decision making and analytical ability, responsibility and accountability, ability to work in teams, creativity and critical thinking skills. Deans/directors indicated that ethical values, computer skills, time and project management, persuasive ability and global awareness were less important attributes.

The results of the respondents' ratings of the 16 attributes are presented for prospective employers and business school deans. The results of the t-tests for paired samples performed supported two of the three hypotheses. The mean rating among the soft and hard skills for the two groups were compared. Utilizing the Levine test, there is support for equal variances. Hence, for the soft skills, the t-test for Independent Samples had a p-value of 0.015 when the Equality of Variances assumption was used; as a result, the null hypothesis is rejected and it can be concluded that there is a significant difference in the importance of

soft skills as rated by the prospective employers of MBA graduates vs. the business school deans and directors. For the hard skills, the t-test for Independent Samples had a p-value of 0.874 when the Equality of Variances assumption was used. As a result, the null hypothesis is not rejected and there is insufficient evidence to conclude a significant difference in the importance of hard skills as rated by the prospective employers of MBA graduates vs. the business school deans and directors.

Implications for Business Education

The top seven skills desired by prospective employers (in order of importance) are responsibility and accountability, interpersonal skills, oral communication, teamwork, ethical values, decision-making and analytical skills, and creativity and critical thinking. The average mean for soft skills (SS) among the prospective employers was 4.57 (on a 5 point scale), indicating that human resource managers determine that these skills are highly essential to the organization. The soft skills were all ranked in the top half of the critical managerial skills list. The hard skills (HS), written communication, time management, project management, presentation skills, ability to assimilate new technologies, computer skills and global/international business skills were all ranked in the lower half of the list. The average Mean for hard skills (HS) among human resource managers was 3.93 (on a 5 point scale) indicating that prospective employers desire soft skills over hard skills. The skill/ability believed to be most important by Deans/Directors of MBA programs was oral communication. The skill/ability ranked lowest on the list of critical managerial skills among deans/directors was global/international business skills. This is consistent with the finding for prospective employers.

According to the business schools deans/directors of MBA programs, the top seven critical skills/abilities to the organization are oral communication, written communication, interpersonal skills, decision-making, responsibility and accountability, ability to work in teams, and creativity and critical thinking skills. Six of the seven skills are soft skills. The average Mean of soft skills for deans/directors was 4.29 and the average Mean of hard skills 3.96. The results indicate that soft skills are rated higher than hard skills among business school deans/directors of MBA programs.

CONCLUSIONS

Because the goal of graduate business schools should be to provide graduates with skills and attributes that prospective employers desire, the results of this study should be beneficial to business school deans/directors of MBA programs for curriculum revision and other changes in management education. Business schools need to add a substantial focus on the soft skills. They need to continually reassess their goals and strategies and make the necessary changes in order to keep up with the rapidly changing needs of business organizations. They need to be teaching what needs to be taught according to the needs of prospective employers. Graduate business programs must also find methods of strengthening soft skills, or people skills, while continuing to prepare students in the hard skills.

The biggest concern of this research is assessing the degree of measurement error present. The researcher considered the validity and reliability of the measure. The data collected for this study focused on management education in the United States only. Furthermore, due to the regional nature of the study, the researcher excludes respondents from other regional areas since the results of the study focus on one region of the United States rather than the entire nation. Due to limited time and resources, this study did not cover managerial skill preparation in undergraduate business education. Although businesses are interested in skill preparation at the undergraduate level, this study was limited to management education at the graduate level. However, these topic areas could be addressed in future research.

One problem in identifying trends in the literature base is the lack of uniformity in the critical skill set or characteristics and attributes that lead to success in business. Various researchers appear to be using

different terms in the identification or description of similar skills/attributes. For example, should decision making and analytical ability be one skill or should they be broken up into two separate skills? One could argue that analytical skills are hard skills while decision- making skills are soft skills. Another area for future research is to determine if the results would differ if the population of employers were categorized into two groups. One category would be for manufacturing firms while the other would be for service firms. It would be interesting to see if they would rank soft and hard skills any differently. Are human resource managers the ultimate customers of MBA programs? Would the results have changed had front line managers been the sample for this study? While HR managers may preach the "soft skills" line, what do line managers want? Due to the limited resources of this study, the results were obtained from one state. It would be very useful if this type of research was conducted in other regions of the country, a nationwide basis, and/or an international sample. Finally, it would be interesting to do comparative studies of the perceptions of students and employers, students and faculty, and students and alumni.

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BIOGRAPHY

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Professor Shuayto teaches Global Marketing Management, Human Resource Management, Leadership, Strategic Planning, and Marketing Management. She also serves as a marketing and management consultant. During her eight years at the AUB, she consulted in Lebanon, Jordan, Kuwait, Dubai, Sharjah, and Yemen. The types of industries she has consulted with include health care (AUH, American University Hospital), petroleum, airlines (KPC, Kuwait Petroleum Company), communication (Spacetel), and education (AUB, LTU, and University of Sharjah).

Professor Shuayto has over 20 years of professional experience in the fields of retail, food & beverage, health care, and import/export. She acquired the master franchise for the Little Caesars Pizza chain in Lebanon and opened the first outlet in 2003. She is active in her research and is author and co-author of peer-reviewed journals, refereed articles and conference proceedings. Her areas of research include Management Education, Global Marketing Management, Human Resource Management, Expatriation, and Standardization and Customization of Marketing Strategies. Professor Shuayto recently received an "Outstanding Research Award" while presenting at the Global Conference on Business & Finance. In addition, she won the "Best in Category" Award for the MENA (Middle East and North Africa) region in the 2011 EFMD (European Federation of Management Development) Case Competition. The name of her case is: *ELIE SAAB: Growth of a Global Luxury Brand.* She can be reached at Lawrence Technological University, Southfield, MI 48075, (248) 204-3070, nshuayto@ltu.edu.

ACCREDITATION IN INDIA: PATH OF ACHIEVING EDUCATIONAL EXCELLENCE

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ABSTRACT

This article identifies the noteworthy role played by various statutory bodies constituted and expanded by the Indian Government for the purpose of quality assurance and attainment of sustainable excellence in the Indian higher education system. Accreditation has now become vital for all universities in India except those created through an act of Parliament. Without accreditation, these institutions have no legal entity to call themselves a University and award 'Degrees' which are not treated as valid for academic/employment purposes. Since quality assurance is an evolving issue the emphasis is deliberately given to excellence and quality as the distinct constituents of higher education in India. This is done through a combination of self and external quality evaluations, endorsements and sustenance initiatives. This paper also highlights existing key issues of the accreditation process and vital points that need to be incorporated to generate insights about the future of accreditation.

JEL: I2, I23

KEYWORDS: Accreditation, Educational, Excellence, India, Path

INTRODUCTION

In understanding how the higher education system is regulated it is essential to realize the difference between "accreditation" and "recognition" in India. Until recent years, being "recognized" was the only mode of validating postsecondary institutions. The process involved evaluation of the institution in question by the recognizing agency in order to establish whether it meets the standards and norms put forth by the agency. Unlike the usual accreditation process which involves periodic review by the accreditation agency to ascertain if an institution is meeting its objectives and established standards, whereas "recognition" is a one-time process.

Higher education accreditation is a type of quality assurance process under which services and operations of post-secondary educational institutions or programs are evaluated by an external body to determine if applicable standards are met. If standards are met, accredited status is granted by the agency". *(Wikipedia)* Accreditation is broadly used for understanding the "Quality Status" of an institution. In the context of Higher Education, the accreditation status indicates that the particular Higher Educational Institutions (HEI) – a College, a University, or any other recognized Unit therein, meets the standards of quality as set by the Accreditation Agency, in terms of its performance, related to the educational processes and outcomes, covering the curriculum, teaching-learning, evaluation, faculty, research, infrastructure, learning resources, organization, governance, financial well being and student services (NAAC). Basically accreditation is the process by which a (non-)governmental or private body evaluates the quality of a higher education institution as a whole or of a specific educational programme in order to formally recognize it as having met certain predetermined minimal criteria or standards. The result of this process is usually the awarding of a status (a yes/no decision), of recognition, and sometimes of a license to operate within a time-limited validity. (Vlãsceanu, *et al*., 2007, p. 25)

Accreditation is important because: 1. the institution knows its strengths, weaknesses, and opportunities through an informed review process, 2. the identification of internal areas of planning and resource

allocation collegiality on the campus, 3. funding agencies look for objective data for performance funding, 4. The institution initiates innovative and modern methods of pedagogy. 5. A new sense of direction and identity for the institution, 6. provides society with reliable information on the quality education offered. 7. Provides employers reliable information on the quality of education offered to the prospective recruits and 8. Intra and inter-institutional interactions. (*Source*: NAAC)

This article is a deliberate attempt to understand and analyze the current accreditation process and its significance in making Indian higher education system a world class higher education system. To attain this objective the present research first reviews the findings of recent studies on the issue under the. Then the paper highlights the key trends of accreditation and its evolution in higher education in India by the various statutory bodies to explore the prospects of bringing excellence in Indian education system under the section of. Finally, the article generates noteworthy insights under the section titled the future of accreditation process in India. The paper closes with some concluding comments.

LITERATURE REVIEW

The Indian education system has its roots in the system inherited from the British at independence in 1947 (Patil, 2007). The Indian higher education system is one of the largest of its kind in the world. In spite of several built-in quality controls, such as the University Grants Commission's guidelines and the affiliating functions of the university, deterioration in the quality of higher education was a serious concern for all stakeholders (Pillai & Srinivas, 2006). In 1994 India established the National Assessment and Accreditation Council (NAAC) to ensure and enhance the quality of Indian higher education and to play an international role as a quality assurance agency. The NAAC has made its assessment and accreditation process acceptable to the institutions and academia through an intensive awareness campaign and academic interactions involving various universities, colleges, state higher education councils and other academic forums. However, it is equally important to obtain continuous feedback from the beneficiaries in the field to determine the effectiveness and enhance the efficiency of the organization. This study shows that 18 years of its existence the NAAC has earned substantial goodwill and appreciation from the academic community. Simultaneously, it also suggests a need for incessant effort on the part of the NAAC to strengthen and fine-tune its processes and procedures.

As increasing numbers of young Indians are striving for a better life, in these challenging times, a few questions arise. Is the education system ready for this surge? Are they getting good quality education? Are there young qualified teachers, libraries, equipment and facilities? Of the many Institute rankings conducted in the country every year, parameters stressed are infrastructure-physical, knowledge centers, teaching aids; education process, faculty, research, consultancy, publications and Management Development Programmes (MDPs); academic programmes–admission, curriculum, delivery systems; social responsibility; placement and industry interface. Most institutes have good physical and academic infrastructure but have problems in other areas. Moreover, the quality of an institution is not based on the infrastructure quality alone, but on many other equally important factors. The worst area of performance among the majority of B-schools has been the poor faculty and lack of research orientation (Sinha, 2007).

The objective of the accreditation process is to develop a quality conscious system of technical education where excellence, relevance to market needs and participation by all stake holders are ensured. The process focuses on building a professional education system as vendors of human resources that will match the national goals of growth by competence, contributions to economy through competitiveness and compatibility to societal development. It intends to ensure a teaching-learning environment as per accepted good practices and institutions which has the essential and desirable features of quality professional education. For institutions, it signifies their strengths, weaknesses and opportunities for future growth, for the industry and infrastructure providers, it signifies, identification of quality of institutional capabilities. (Sahay &Thakur, 2007).

Accreditation principles are based on best practices in business education. These principles promote excellence in business education through a benchmarking process, which is helpful in determining why the institution is, or is not, achieving its mission and broad-based goals, and in interpreting the results of the outcomes assessment process. Within the value chain, for each of the activities, institutions must achieve and demonstrate an acceptable level of performance consistent with their mission while satisfying defined standards. Just as managers face rising expectations for their performance and the performance of their organizations, programs in management education also should anticipate rising expectations, even within a given mission. No fixed curriculum, specific set of faculty credentials, single type of faculty performance, or approach to instruction will suffice over time. The processes used to strengthen curricula, develop faculty, improve instruction, and enhance intellectual activity determine the direction and rate of improvement. Thus, these processes become important along with the necessary review of inputs and assessment of outcomes. (Sahay & Thakur, 2007)

A recent Indian study (Dey, 2011) thoroughly evaluates the significance of accreditation in the Indian education system. The study reviews the outcome of accreditation exercises undertaken by agencies like NAAC and NBA. They find these exercises have significant impact on improving the quality of higher education. The strengths and shortcomings of the institutions are detected for initiating appropriate action. The stakeholders- the government, students and employers- duly benefit from information and analysis of institutional performance. A joint effort between institutions and accreditation bodies would be needed to ensure good coordination and communication, so that they can adhere to an ethical code of good practice and be objective, fair and rigorous in the task of accomplishing quality assessment and accreditation.

Another work (Mangnale et.al, 2011) investigates the role of Internal Quality Assurance Cell (IQAC) in quality management in education in Maharashtra state of India. The findings exposed that institutions were confidently provided academic activity reflecting their goals and objectives with highly qualified faculty through an eclectic approach with the support of research with ample focus on library and community services. Students also expressed different indecisive perceptions on the academic activity, faculty communication skills, motivation and mentoring etc. Only 80% OF students responded positively about the faculty subject knowledge and sports, and infrastructure facilities provided by the institution. The author concluded that both institutions and students wanted a more constructive role from the Internal Quality Assurance Cell (IQAC) in protecting the quality of higher education.

Accreditation is fast becoming the dominant method of evaluation in the European Higher Education Area (Stensaker, 2011). Research traces the political process supporting the introduction of this method in Europe and identifies different theoretical understandings and practices which shed light on how we can interpret the spread and role of accreditation in Europe, before discussing current trends in European and US accreditation, which could pave the way for a joint research agenda.

ACCREDITATION IN INDIA

"Quality is a concept; it's a philosophy; it's a journey; it's also what we practice. We at NAAC strive to create awareness and understanding of quality, and quality assurance in higher education as a necessary ingredient to national development". (Prasad, 2007; Former Director, NAAC).

In India accreditation for higher learning is overseen by autonomous institutions established by the University Grants Commission. Accreditation for universities in India is required by law unless the university was created through an act of Parliament. Without accreditation, these institutions have no legal entity to call themselves a University/Vishwavidyalaya and to award degrees which are not treated as valid for academic/employment purposes. *(Wikipedia)*. In recent times the Indian government has taken initiatives to establish a systematic mechanism for accreditation in order to maintain and elevate the

quality of higher education in India. Emphasis on higher education in India can be understood by the number of universities currently present in India and the quality of education they provide.

The number of Universities/University-level institutions has increased 18 times from 27 in 1950 to 504 in 2009. The sector boasts 42 Central universities, 243 State universities, 53 State Private universities, 130 Deemed universities, 33 Institutions of National Importance (established under Acts of Parliament) and five Institutions (established under various State legislations). The number of colleges has also increase with just 578 in 1950 growing to more than 30,000 in 2011. (Data Source: MHRD).

The Indian system of higher education has always responded well to the challenges of the time. Two decades ago, when the system came under severe criticism that it had allowed the mushrooming of higher education institutions (HEIs), compromising the quality of educational offerings, the Ministry of Human Resource Development (MHRD) and the University Grants Commission (UGC) took initiatives to restore the standards of higher education. Consequently, the National Policy on Education (1986) places special emphasis on upholding the quality of higher education in India. On the recommendations of the Programme of Action (1992) document that provided the guidelines for implementation of the National Policy on Education (1986), in 1994, the UGC established the National Assessment and Accreditation Council. (Prasad & Stella, 2004).

The Ministry of Human Resource Development (MHRD)

The Ministry of Human Resource Development (MHRD) is responsible for supervising the functioning of all the universities in India through its chief regulatory body- Universities Grants Commission (UGC). The other government organizations whose contribution to the Indian educational scenario worth mentioning are All India Council for Technical Education (AICTE) and National Assessment and Accreditation Council (NAAC). The following statutory bodies have been constituted by the Indian government which have been in active role in assuring and maintaining the quality and standards of higher education system in India.

University Grant Commission (UGC)

UGC is the apex body that provides recognition for universities in India. In 1956, UGC was established as a statutory body of the Government of India through an Act of Parliament. It is responsible for the determination and maintenance of standards of teaching, examination and research within the context of university education in India. It also keeps track of the financial needs of universities and allocates and disburses grants to universities and colleges. The UGC serves as the vital link between the Central and State governments and other institutions of higher learning, and advises them on the measures necessary for the improvement of university education. The UGC's mandate includes Promoting and coordinating university education; Determining and maintaining standards of teaching, examination and research in Universities; Framing regulations on minimum standards of education; Monitoring developments in the field of collegiate and university education; Disbursing grants to the Universities and Colleges; Serving as a vital link between the Union and State Governments and institutions of higher learning; Advising the Central and State Governments on the measures necessary for improvement of university education. To monitor standards of the higher educational institutions the National Assessment and Accreditation Council (NAAC) was created as an autonomous body, under section 12 (c) of its Act in September 1994.

National Assessment and Accreditation Council (NAAC)

National Assessment and Accreditation Council (NAAC) was established by the UGC in September 1994 at Bangalore for evaluating the performance of the Universities and Colleges in the Country. NAAC's mandate includes the task of performance evaluation, assessment and accreditation of universities and

colleges in the country. The philosophy of NAAC is based on objective and continuous improvement rather than being punitive or judgmental, so that all institutions of higher learning are empowered to maximize their resources, opportunities and capabilities. Assessment is a performance evaluation of an institution and/or its units and is accomplished through a process based on self-study and peer review using defined criteria. Accreditation refers to the certification given by NAAC which is valid for a period of five years. At present the Assessment and Accreditation by NAAC is done on a voluntary basis. The prime agenda of NAAC is to Assess and Accredit Institutions of higher learning with an objective of helping them work continuously to improve the quality of education. Assessment is a performance evaluation of an HEI and/or its units and is accomplished through a process based on self-study and peer review using defined criteria. Accreditation refers to the certification given by NAAC which is valid for a period of five years. NAAC is entrusted with the task of performance evaluation, assessment and accreditation of Universities and Colleges in the Country. NAAC has been instilling a momentum of quality consciousness amongst Higher Educational Institutions (HEIs or 'Institutions'), aiming for continuous improvement. NAAC is triggering a 'Quality Culture' among the various constituents of the HEI, as well as enhancing the awareness of Institutional Quality Assurance with all stakeholders.

The mission of NAAC is to evaluate and accredit higher education institutions on the basis of clearly defined criteria that include: 1. The Curriculum 2.Teaching and Student Assessment 3. Infrastructure and Resources 4. Student Support and Progression 5. Institutional Management. NAAC will release a new rating manual soon where the focus will be on new challenges emerging from diverse institutions. (Source: Times of India, Feb 25, 2012) "As of now, we have a single manual for all types of institutions but it is not adequate to address the challenges emerging from the newer types of higher education institutions". (H.A. Ranganath, Director, NAAC-Source: TOI, Feb 25)

All India Council for Technical Education (AICTE)

This organization was established in November, (1945) as a regulatory council to ensure proper planning and development of technical education in India and for maintaining norms and standards in the field. This includes areas of study such as engineering, technology, pharmaceutical sciences, architecture, town planning, hotel management, catering technology and applied arts and crafts. The Council has the authority to establish regulatory measures related to courses, curricula, facilities, etc, grant approval to start new technical institutions and introduce new courses.

The Government of India (Ministry of Human Resource Development) also constitutes a National Working Group to look into the role of AICTE in the context of proliferation of technical institutions, maintenance of standards and other related matters. The Working Group recommended that AICTE be vested with the necessary statutory authority for making it more effective, which would consequently require restructuring and strengthening with necessary infrastructure and operating mechanisms. The purview of AICTE (the Council) covers programmes of technical education including training and research in Engineering, Technology, Architecture, Town Planning, Management, Pharmacy, Applied Arts and Crafts, Hotel Management and Catering Technology etc. at different levels (AICTE). It can also make recommendations regarding the recognition and de-recognition of institutions and programs through the National Board of Accreditation.

National Board of Accreditation (NBA)

NBA is established by the AICTE, this body periodically evaluates technical institutions and programs based on the norms and standards laid down by the Council. The difference between AICTE approval and NBA accreditation is that the former regulates whether the institution meets the initial requirements of functioning as a technical education provider or offering a new program whereas the latter monitors

whether the institution has proved its ability to sustain and improve upon assessment criteria and has earned credibility by the end users.

NBA in its present form came into existence as an autonomous body on 7th January, 2010, under the aegis of AICTE, with the objective of assurance of quality and relevance of education especially in technical disciplines. NBA has been facilitated improvement of quality and relevance of technical and professional education in the country to bring it to par with international standards. NBA also aspires to become a permanent member of the Washington Accord, which was signed, first in 1989 among accreditation agencies of some countries in order to recognize substantial equivalence in qualifications. (NBA) NBA is working with the mission, "to stimulate the quality of teaching, self evaluation and accountability in higher education, which help institutions, realize their academic objectives and adopt teaching practices that enable them o produce high quality professionals and to assess and accredit the programs offered by colleges and/or institutions imparting technical and professional education." (Source, WOSA 2012, NBA)

Professional Regulatory Councils

Professional councils are also responsible for the recognition of professional programs, promotion of professional institutions and the providing the grants to undergraduate programs. The statutory professional councils are: (Patil, 2007)

All India Council for Technical Education (AICTE)
Department of Electronics Accreditation of Computer Courses (DOEACC):
Distance Education Council (DEC)
Indian Council for Agricultural Research (ICAR)
Bar Council of India (BCI)
National Council for Teacher Education (NCTE)
Rehabilitation Council of India
Medical Council of India
Pharmacy Council of India (PCI)
Indian Nursing Council (INC)
Dentist Council of India (DCI)
Central Council of Homeopathy (CCH)
Central Council of Indian Medicine
Council for Architecture
National Council for Rural Institute
State Councils for Higher Education

FINDINGS AND HIGHLIGHTING KEY ISSUES

The review of the practice of accreditation suggests that it enhances educational excellence as reflected in the key findings highlighted. The significance of accreditation is assuring quality in Education system in India. 1. Accreditation is a process of evaluation of an institution of higher learning. 2. Accreditation is the certification of an institution for a particular period of time in terms of a threshold standard. 3. It serves as a benchmarking tool to improve services by analyzing best practices of other organizations to determine standards of performance and how to achieve them in order to increase customer's satisfaction. (Lewis & Smith, 1994) 4. Benchmark is a comparative standard that every organization strives to achieve. 5. Accreditation leads to performance excellence and total quality management. 6. It is an ongoing external review process for institutions and programmes continue to be reviewed over time for re-accreditation ranging from five years to ten years. 7. Institutions prepare a written summary based on the

standard criteria of the accrediting body. 8. The specific application model of various statutory bodies (NAAC, NBA, DEC etc) are variant to serve specialized needs, but the underlying philosophies of all these models are self-study and external quality assessment. (Prasad, 2007). 9. It stimulates the academic environment for promotion of quality of teaching learning and research. 10. Accreditation provides the quality assurance framework for the academic institutions. 11. Accreditation aims to continuous Improve the education system and education is back bone of any society, hence contributing to societal and further national development. 11. Accelerates and nurtures Global Competency among students and also helps in inculcating value systems in student community. 12. Accreditation overall pursuits for excellence in education.

The Future of Accreditation-An Insight

Since accreditation has become globally significant, this research presents the evidence from the accreditation process in Indian context. We highlight the present scenario and also open pathways to look upon future prospects of accreditation by understanding its relevance in education and the business world. The implication of accreditation can be well assessed through the recent fashion that most employers now prefer to employ job applicants who have gained their education from an institute, college or university with the proper accreditation status. Many employers also look to see that employees have been educated at an appropriately accredited institution when making decisions about business promotions, company advancements, and whether to provide assistance for employees who intend to further their education. It is likely to be practiced worldwide and will be considered an essential standard of education by all stakeholders-the employers, students, business owners, etc. India is no exception to this rule.

The present piece of work also emphasizes that today educational institutions function in a rapid changing and dynamic environment where there are demands and challenges that require innovations. A review of the literature suggest that the purpose of accreditation is to ensure whether the changes in technology, rapid advancements which are leading challenging demands are met by the educational or professional institution. While formulating its Core Values for Accreditation framework, NAAC is in cognizance of the swift changes and consequent metamorphosis in values pertaining to the Indian Higher Education (NAAC).

This is quoted by IAO that "accreditation can influence a prospective student's decision to join traditional campus-based educational institutes as they are understandably concerned about the authenticity of their degrees and its acceptability". The NAAC has produced its new Manuals for Universities, Autonomous Colleges and Affiliated Colleges. (*Source*, NAAC, May 25, 2012). Apart from effective functioning of government accrediting bodies like NAAC, NBA etc, studies suggest that an institution should also construct an active Internal Quality Assurance Cell (IQAC) to internally regulate educational qualities and assuring excellence on various academic parameters set by the government regulatory bodies.

On the basis of a review of current accreditation processes in India, the present article makes some proposals for the future of accreditation. We argue that accreditation should be taken into contemplation to maintain and uplift the Indian higher education system so as to make it an ultimate benchmark for world class education system. This can be done as follows. 1. The accreditation system/body must be trustworthy in terms of academic competence, fairness, and high degree of transparency as well as should be recognized. 2. The legal framework in which accreditation system operates must secure its independence from the government to a certain extent. 3. The accrediting member and the site visit team must be highly esteemed and respected within the profession. 4. The organizing body should be well aware of the predetermined criteria and about the process/purposes of accreditation and its outcome. 5. The standard process of accreditation must include the following stages-self-evaluation, an external evaluation, a final report by the site visit team and the decision on accreditation. 6. Publication of a summary of the report providing the basis for decision should be considered. Such practice will not only

fulfill the essentials of accreditation criteria but also may change the face of future accreditation process to excel and set benchmarks for other nations to not only help in facilitating mobility of Indian students but also draw students from aboard to these institutions in future.

CONCLUSION

This research discussed how accreditation has taken a significant place in the Indian government to bring excellence in higher education. Higher education is the backbone of the society. It is the quality of higher education that decides the quality of human resources in a country (Prasad, 2007). Thus quality assurance is a vital aspect in the education world. For this purpose Accreditation has come into the picture. On the basis of the above review and discussion on the denotation and objectives of the accreditation it can be understood as the process of quality assurance. It involves giving credit where it is due for some clearly visible and demonstrable strategies of academic activities and objectives of the institutions, known to be honestly pursued and efficiently achieved by the resources currently available with a potential for continuous improvement in quality for effective growth (NBA). Through establishing various statutory bodies in India like NAAC, NBA etc, the Indian higher education has addressed a major impediment that prevented the recognition of most university degrees. Focus has shifted to the future face of accreditation and the importance of education to the various stakeholders.

Accreditation ideology are based on best practices in education. This philosophy promotes excellence in education through a benchmarking process, which is helpful in determining why the institution is, or is not, achieving its mission and broad-based goals, and in interpreting the results of the outcomes assessment process.

Certain limitations of this study might open the avenues of future research in this area. The scope of the study could have been broadened by adopting an appreciative approach to accreditation process. Furthermore within the Indian context the responses could have been openly taken from the people directly associated with the various statutory accrediting bodies in India. This could help discover and highlight certain issues which might have gone untouched in the present study. Based on such results, future research on this area can be planned including an interesting follow-up to validate and critically evaluate the theory built in the present work.

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A COMMUNICATION-FOCUSED MODEL FOR LEARNING AND EDUCATION

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ABSTRACT

Discontinuities in markets and technology as well as issues of performance are roiling the field of higher education. Despite the profusion of educational and learning concepts, a comprehensive model for both explaining and testing for educational performance has been hard to come by. The paper starts with a brief retrospect of the better-known conceptualizations of learning and educational processes. Next, built atop the Community of Inquiry framework and employing the typology for the purposes of communication under knowledge-intensive environments, a "Communication-Focused Model for Learning and Education" is proposed. With clearly laid out causal linkages, the model shows how the sub-components of a communication-based design aggregate to a comprehensive educational design. Such educational design in turn is shown to influence the learning processes and, finally, the quality of learning, which can be assessed better with the proposed comprehensive model. Suggestions for the empirical applications of the model and for its heuristic extrapolations to arrive at new educational designs are provided.

JEL: I20, I21, I23

KEYWORDS: Higher Education, Educational Design, Learning Model, Learning Outcomes

INTRODUCTION

Severe turmoil in its markets, uncertainties about impending technological discontinuities, and widely known problems in performance have been buffeting the field of higher education for some time. Citing several critical studies, the Economist (2010) declared, "America's universities lost their way badly in the era of easy money." This is truly an unfortunate state of affairs when the overall global demand is soaring. (Archibald & Feldman, 2011) Whenever the dust settles, institutional survival would more than likely depend on the capability to satisfice both the basic and transient learning needs of a rapidly expanding global market.

It is reasonable to have doubts, given all the conundrums, whether our current educational institutions can meet the learning needs while adjusting to the transformations of markets and technologies. Arum and Roksa have empirically, and alarmingly, highlighted the current conditions of 'limited [undergraduate] learning in college campuses.' (Arum & Roksa, 2011) Many proposed solutions seem to be proffered more because they are new and available than because they have been shown to improve learning. The field is rife with classifications, concepts, analogies, and frameworks. Yet, it is sorely lacking in a reasonably comprehensive model that can be used both to explain performance (that is, learning outcomes) and to test it empirically. Building on the progress to date in conceptualizing learning and education and on the insights from the research on communication, this paper will attempt to fill that gap with a suitable model.

The paper is organized as follows. It begins with a section on literature review with two parts. The first part begins with the early conceptualizations around learning and education and ends with the Community of Inquiry (CoI) framework. (Garrison, et al., 1999) The second part describes the insights from the research on communication and innovation. In the next section, extending the two streams of work cited in the literature review and merging their separate insights, a testable "communication-focused model for learning and education" is proposed. In the section that follows on Discussion, I show how the model can

help improve learning and institutional outcomes. Finally, in Concluding Comments, the contributions as well as the limitations of the paper are summarized.

LITERATURE REVIEW

Although learning is a multifariously complex process, conceptualization and theoretical articulation around it started with a rather simple, perhaps simple-minded, formulation based on one didactic technique. Even with much passage of much time, pedagogy is a short hand term for all that happens in an educational setting. Words do take on meaning that users want to give it over time. However, it is worthwhile to remember that the literal meaning of pedagogy is to teach a child. Scholars have added much sophistication to that instructor-centered early conceptualization.

It is easy to see why the early models started around major individual players. In the case of pedagogy, the main player is the instructor, historically the most influential and powerful person in the learning process, and respected as the repository of much knowledge. This had to change, of course, as the world's knowledge began increasing exponentially and the learning continued later into the adult lives of the learners. This paved the way for Knowles (1970) to elucidate andragogy. If pedagogy is teacher-knows-best, teaching of 'children,' andragogy is all about adult education. Andragogy is student centered, with the expectation of self-direction, readiness to learn, use of experience, and a performance orientation to learning. Instructor moves from being a sage on the stage to a guide on the side (Durgahee, 1998).

In a mildly chiding tone, Forrest and Peterson (2006) exhorted management educators to eschew using the term pedagogy and to start using the term andragogy because that is what they mostly do. It is ironic and a bit telling that more than a quarter century after the principles of adult education came into vogue, for most of us, our terminology, if not technique, still harks back to 'pedagogy.' Many ideas related to andragogy have resonated in the educational setting, although the term itself certainly has not. It took another few decades after andragogy for newer concepts to emerge and, when they did, they captured progressively more of the environmental influences on learning. Reflecting, perhaps, both self-awareness of needs and available choices, heutagogy (Ashton & Newman, 2006; Hase & Kenyon, 2000, 2007; Kenyon & Hase, 2001) added a specific dimension of 'self-determination' in learning. It was put forward with the rapidly changing vocational contexts in the global environment in mind. It was also assumed that ICTs could be particularly helpful for the self-determined learner to quickly access knowledge. Ergonagy (Tanaka & Evers, 1999a, 1999b), an archetype derived from Japanese tradition, is also on a similar vein. It gives greater emphasis to vocational education and perhaps a little less to 'self-determination.'

Other theories focusing on learner's motivation and efficacy also emerged around the same time. Constructionism (Harel & Papert, 1991; Papert, 1987), using constructivist theories of psychology, proposes "the idea that learning is most effective when part of an activity the learner experiences as constructing a meaningful product." As such, constructionism is closely related to experiential education. Papert originally proposed constructionism for elementary school students. On some other far end of the spectrum is the transformative learning theory (Mezirow, 1991; Mezirow, 1997), which also acknowledges the power of experience. However, in contrast, it targets adult learning and calls for enabling the learner to be 'critically reflective of the assumptions of others' as well as 'one's own.' That, in turn, would help the learner to be an effective collaborator in posing and solving problems and in adapting to change.

We can safely say that in the above concepts, the environmental influences are acknowledged, but are embedded only indirectly through the actors. They are front and center, however, in some of the (mostly) newer, and more comprehensive, models. A case in point is Ubuntugogy. Bangura (2005) arrives at

Ubuntugogy inductively from the quintessentially African worldview enshrined in the maxim, "a person is a person through other persons." Thus, the teaching and learning processes enshrine dialog and consensus building with not only those around you, but also those from whom you inherit knowledge and those to who you pass it along. Another example from ancient India, currently undergoing modest revival, is Gurukulam, which prescribes for a student a familial relationship with the teacher, and through the teacher with the rest of the family and community. It is anchored in the benefits of apprenticeship and close physical proximity. Students are deemed as the extended family or part of the clan, 'kula' in Sanskrit, of the teacher. If we consider the evolution of the various concepts presented so far, it is clear that over time greater attention started being paid to the contextual influences from the learning environment. In particular, the vocational and the social contexts began getting increased and rightful importance.

The Community of Inquiry Framework

Conceptual models have become even more comprehensive, and complex, in the last few years. A learning framework of note is from Garrison and colleagues (1999). Known as the Community of Inquiry (CoI) framework, it is very comprehensive and its components have been variously tested and validated (Arbaugh et al., 2008; Arbaugh & Hwang, 2006; Daspit & D'Souza, 2012; Garrison, Cleveland-Innes, & Fung, 2009; Shea, Sau Li, & Pickett, 2006). It shows the major elements for a successful "educational experience." It calls for three types of *presences*: teaching, cognitive, and social. All three have to come together properly, using communication medium, for a satisfying educational experience. Cognitive presence is considered the most essential for the success in higher education, and it is taken to mean the ability of the participants "to construct meaning through sustained communication." Social presence is defined as the ability to project personal characteristics in conversations and thereby present themselves to other participants as "real people." Teaching presence captures the more classic educational processes and content, conventionally initiated by the teacher, as well as the learning activities and assessment. Communication drives, behind the scenes, the CoI framework, delivers each of the different presences and integrates them to create the educational experience. The three circles in the middle and the labels within them in Figure 1 represent the CoI framework.

Many empirical studies followed the CoI framework. A serious problem, turned out to be the great difficulty to link the framework empirically to learning outcomes (Daspit & D'Souza, 2012; Garrison, Anderson, & Archer, 2009; Rourke & Kanuka, 2009). There also are other conceptual issues. For example, for checking the association of teaching presence with learning outcomes, the mediating pathways and their relative efficacy need to be considered. This applies also equally to the cognitive and social presences, as well as the intersections of the three presences. Yet, we see that only a catchall label of "communication medium" serves as a gross, and rather neglected, proxy for these functions in the CoI framework. Some constructs widely used in communication research in the context of technological innovation can come in quite handy in this context to make the connection to outcomes.

The difficulty to link to learning outcome in a definitive manner is by no means limited to the CoI framework. Many studies on the use of educational technologies (Alavi, 1994; Alavi, Marakas, & Yoo, 2002; Alavi, Wheeler, & Valacich, 1995; McKinney, Dyck, & Luber, 2009) show positive influence, but side-step the question about overall learning outcomes. Alavi and Leidner (2001) agree that considerable potential exists for research that examines related issues more comprehensively. They specifically call for in depth examination of how "learner's interactions with learning materials, peers, and instructors are mediated through advanced information technologies" without "ignoring the larger context." Despite that well-argued and clearly articulated call, the scholars of learning seem hesitant to take the next steps along those lines. Such steps should not be overly difficult since the scholarship on communication, especially in the context of technological innovation, has a rich and highly borrowable tradition that permits careful study of 'interactions' under conditions of high knowledge-intensity.

Research on Communication and Technological Innovation

Only through effective communication can we accomplish the teaching, cognitive, and social presences, which collectively constitute the CoI framework's educational experience. This is captured in the bottom caption of the framework by Garrison et al. (1999), 'Communication Medium,' for their schematic for CoI, reproduced in Figure 1. Scholars from many fields have delved into communication. With their focus on performance under knowledge-intensive conditions, studies from the field of technological innovation (Allen, 1977), are particularly relevant to educational contexts. Noteworthy findings from this genre include the strong influence of organizational and physical boundaries in fracturing communication networks (Allen, 2007; Allen & Henn, 2006) and the powers and the limits of technology for mediating information-intensive communications (Allen, 1986; Allen & Scott Morton, 1994). Allen (2006) writes: "A critical success factor in the innovation process requires at least that the organization be able to access, maintain, and transfer knowledge from person to person." That might as well be spoken about education, with 'innovation process' replaced with 'educational experience' and 'organization' with 'students and teachers.' There are deep-rooted similarities in the knowledge transfer phenomena and processes needed for innovation and for education. Therefore, the scholarship on communication for innovation is particularly relevant for education.

Elucidation of the goals for communication is helpful for designing and managing the infrastructure and the environment around it. With this in mind, the types of communication based on desired purposes or goals have been unpacked in the related research. Three types have been put forward (Allen, 1986, 2007): for coordination of activities (e.g., Gulati, 1998; Kogut & Zander, 1996; Malone, 1987; Van de Ven, Delbecq, & Koenig Jr, 1976), for exchanging information (e.g., Alchian & Demsetz, 1972; Argyris, 1977; Daft & Lengel, 1986; Maier, 2007; Shapiro & Varian, 2000), and for creating synergy (e.g., Cattell, 1951; Hackman, 1987; Hall, 1971; Hall & Watson, 1970; Lasker, Weiss, & Miller, 2001; Tattersall, 1984). Scholars in economics and strategy use, instead of synergy, a closely related term of economies of scope (Berger, Hanweck, & Humphrey, 1987; Panzar & Willig, 1979; Panzar & Willig, 1981; Teece, 1980) , which is intended to capture the underlying synergies from bundling of products and branches of value chain. Each of these types has had a long, storied, and somewhat independent scholarly tradition.

Despite the scarcity of their simultaneous presence in the scholarly literature, it would be difficult to argue against the importance of communication for coordination, information, and synergy under knowledge-intensive environments. If you were to ask, what else might be expected from communication, the answers, in all likelihood, can be subsumed in one of these three types. They are, therefore, collectively exhaustive. There is no claim that they are mutually exclusive; communication for coordination may include significant information collaterally provided, which may lead also to synergistic effects. The elements of the communication typology are not exactly orthogonal. Nonetheless, as we saw above in their separate bodies of literature, the underlying constructs, of coordination, information, and synergy, are remarkably unique, and thus have sufficient contrast among them.

A COMMUNICATION-FOCUSED MODEL FOR LEARNING AND EDUCATION (CFMLE)

We can explore fruitfully how the three types of communication might be conceptualized specifically in the context of an educational setting. Structuring, organizing, and sequencing of the learning processes in an educational setting are very important. All those items fall under our first type of communication for coordination. The Learning Management Systems, like Blackboard, shine here. The second type of communication is about transferring information. We use the term information to include all elements in the hierarchy of knowledge, which are sent, received, and cognitively available for use. This is the classic purpose of education. The third type of communication is for synergy without which the educational experience will be incomplete. This sort of communication might usually, though not necessarily, happen outside of instructor-student dyads. It could include cohort learners, the surrounding context, and the

surrounding community in the learning process. The richness and diversity of such a nexus, therefore, if properly embedded in the learning process, can promote unexpected interpersonal creativity. Synergy also is the value-added from 'community,' as envisaged in the CoI (the 'Community of Inquiry') framework. Table 1 provides the listing of the three elements from the communication literature. We will henceforth refer to it as the C/I/S (Coordination/Information/Synergy) typology.

A careful reader would have noticed in the CoI framework three *sub*-elements labeled: 'Supporting Discourse,' 'Selecting Content,' and 'Setting Climate' at the intersections of the three presences. These elements of overlap in the framework correspond to the C/I/S typology fairly directly, which will be shown more clearly shortly. Recognizing such correspondence can unlock for education the insights and lessons from the scholarship on communication, especially for the design and creation of more suitable environment for given educational goals.

Table 1: Different Types of Communication Needed for Innovation - Adapted from (Allen, 1986, 2007)

Purpose	Description
Coordination	Communication to coordinate the learning process
Information	Communication to send and acquire knowledge
Synergy	Communication to promote interpersonal creativity

This table provides the three purposes of communication deemed essential according to the research on innovation. They are collectively exhaustive, although not entirely orthogonal.

It is clear that two of the three labels, 'Supporting Discourse' and 'Setting Climate,' relate to communication-intensive activities. Garrison et al. used 'Selecting Content' as the third label. 'Selecting' may not appear to be communication-intensive. Since it is at the intersection of teaching and cognitive presences and since the entire framework is enmeshed, as Figure 1 shows, in 'Communication Medium,' it stands to reason that 'Delivering Content' would be more appropriate here than 'Selecting Content.'

It is easy to see with that adjustment how the three elements from the CoI framework correspond to the C/I/S typology. 'Supporting Discourse' would map to 'Coordination,' 'Selecting [Delivering] Content' to 'Information,' and 'Setting Climate' to 'Synergy.' In Table 2, we have the elements at the intersection of CoI framework's three presences and show the mapping to the C/I/S typology. Figure 1 explains this graphically. The mapping shows the correspondence between the communication types undergirding the learning environment with the types identified in the innovation literature.

Table 2: Intersections of Teaching, Cognitive and Social Presences of CoI (Garrison, et al., 1999) - Mapped to Types of Communication (Allen, 1986, 2007)

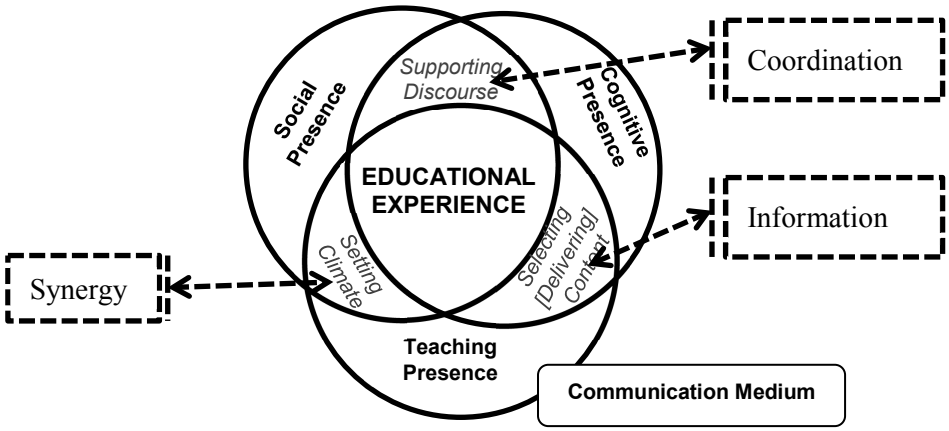
Presence	Teaching		Cognitive
Cognitive	CoI: 'Selecting Content'	[Delivering]	
	C/I/S: Information'		
Social	CoI: 'Setting Climate'		CoI: 'Supporting Discourse'
	C/I/S: 'Synergy'		C/I/S: 'Coordination'

This table provides the mapping among elements of interest from two research streams. It shows how the interactional spaces in the three presences (teaching, cognitive, and social) of the CoI framework maps to the purposes of communication, as elucidated in the innovation literature.

Interposing the C/I/S typology into the CoI framework has several advantages. The most general of the advantages is that the scholarship on innovation and communication becomes accessible to the field of education. There also are other specific advantages. The C/I/S typology provides the crucial intermediate constructs for making the studies linking CoI framework to learning outcomes much more robust. This will be explained further later. The typology also provides a lens to examine carefully how the

educational technologies are helping or hindering the goals of learning. A typology for communication in the innovation practice and literature, thus, allows us to link the CoI framework to educational design and performance.

Figure 1: Elements of CoI framework's (adapted from Garrison, et al., 1999) Linked to Purposes of Communication

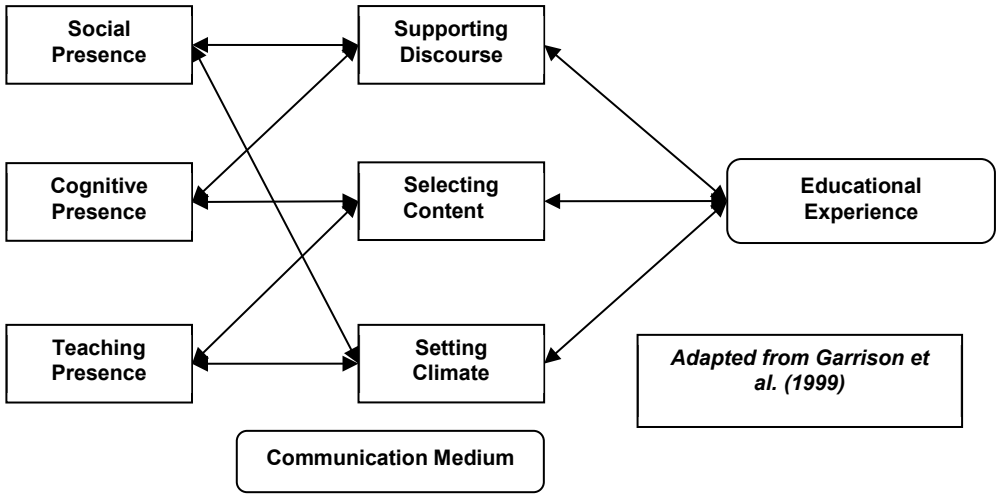


The figure shows the CoI framework. The intersections of the three presences are mapped to the purposes of communication derived from the research on innovation.

Given the importance of communication in education, it would only be appropriate to incorporate its proper role in our conceptualizations and theoretical models. Garrison et al. (1999) presented the CoI framework as a Venn diagram. Although it succeeds in a panoptic capture and presentation of ideas, the linkages and interdependencies are a bit too fuzzy and the role of communication comes across as secondary. I provide first a converted schematic of this framework in Figure 2 showing explicitly the plausible causal linkages, as implied by Garrison et al., among the various constructs. This, therefore, is a 'linearized' version of the CoI framework, which provides a conceptual bridge and a commensurable precursor to a model to be presented next.

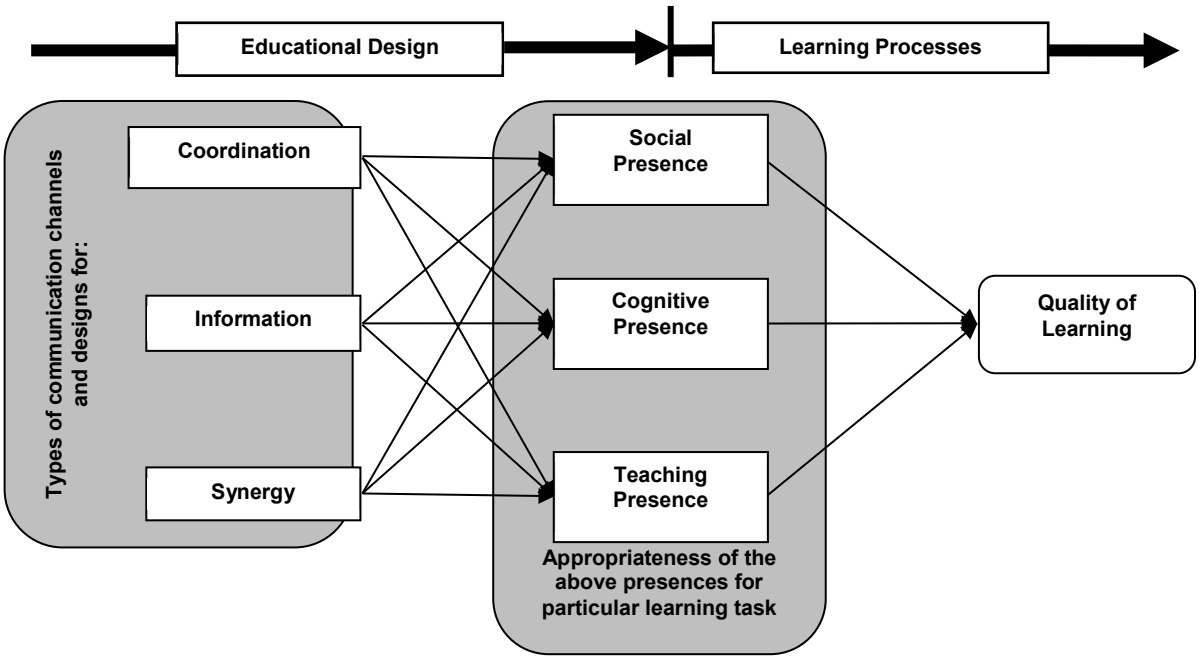
To conduct empirical work and to induce convincing new theory from it, we need a crisper model with unambiguous causal linkages. Based on the earlier mapping between CoI framework and the purpose-based communication typology, I propose, in Figure 3, a 'Communication-Focused Model for Learning and Education' (CFMLE). As the name indicates, in contrast to the CoI framework where it was subsumed, communication is ensconced in CFMLE in a primary role. Channels (face-to-face, telephonic, digital, etc.) and related designs (in-class discussions, asynchronous chats in digital bulletin board, document and video archives, etc.) that match the requisite communication determine the adequacy of the social, cognitive, and teaching presences for a particular learning task. The teaching presence needed for an advanced finance class would be different from that needed for an internship class; the social presence for an accounting class would be different from that of a strategy class. Therefore, the presences have to be appropriately envisioned and adjusted and, in turn, the 'right' presences would be accomplished by ensuring proper selection of the communication channels and related design.

Figure 2: Community of Inquiry Model Showing Causal Linkages - Converted from Original Venn Diagram



The figure shows the original Venn diagram of the CoI framework flattened to a schematic showing plausible causal linkages. This is an intermediate step towards the model proposed in the paper.

Figure 3 : Proposed Communication Focused Model for Learning and Education (CFMLE)



The figure shows the merging of the C/I/S typology from the innovation literature and the elements of the CoI framework to arrive at the proposed model with explicit causal linkages.

CFMLE is roughly bifurcated, unlike the CoI framework, into a first part of Educational Design and a second part of Learning Processes, which lead to Quality of Learning. The full model fundamentally says that a proper, communication-based educational design creates the right mediating environment in which learning processes can thrive and lead to high quality of learning. The original CoI framework had the

label of 'communication medium' at the bottom, indicating that the envisaged process is immersed in communication. We have unpacked communication and its influencing linkages in CFMLE. It would be now possible to check empirically, using the first half of CFMLE, if the 'right' environments have been created. Disentangling communication into components based on coordination, information, and synergy provides many possibilities for such a research design. The differential role of technology-based versus traditional channels for fostering each of the presences will be of particular interest. Which communication channel fosters which presence best, and how, also would be also of great interest.

Partitioned separately or carefully in tandem with educational design, the three presences - cognitive, teaching, and social – also can be tested for their impact on the quality of learning. Thus, the received wisdom about suitable and appropriate environment (in other words, the right composition of the cognitive, teaching, and social elements) for a given management subject can be corroborated or rebutted. With proper empirical design, the appropriateness of technology mediation and its impact also can be teased out.

DISCUSSION

The CFMLE, as amended from the CoI framework based on the research on communication, would allow scholars to move from the earlier (primarily) descriptive posture to a performance-focused posture that can enable vigorous empirical investigations, inductive theorizing, and normative approaches. The model is built on two pillars. First, multi-modal reciprocal communication, supported concurrently as needed with the full gamut of human sensorimotor faculties, is a prerequisite for learning complex and difficult subjects. Second, reliable and unbiased assessment of differential learning should be an essential part of an educational offering. The latter would insure that we are primarily dealing with learning, as distinct from, say, reporting, informing, entertaining, etc. Many conflicting forces and stakeholders influence the design and delivery of graduate and undergraduate management education. Notwithstanding all these, the educator – the management professor – must be able to control and manage the communication for learning.

Research & Design Possibilities

The conceptual bifurcation in CFMLE, of separate educational design and learning processes, makes it eminently more convenient for empirical studies. Testing for the effectiveness of educational designs to create intended environments (cognitive, social, and teaching presences) can be decoupled, if needed, from the nomologically distant educational performance. Alternate hypotheses, confounding effects, and the like are handled sometimes better and easier in more proximal causal chains than in distant ones.

This would be especially valuable in management education as the diversity of our topics can be almost as varied as in all of the knowledge disciplines. Rarely would one find anywhere else the range as varied as the 'hard' skills needed in Management Science, Finance, Accounting, and Information Systems, 'soft' skills needed in Organization Behavior and Human Resources, and the 'balanced' skills needed in Marketing and Strategy all under one umbrella. The cognitive/teaching/social 'presences' in our management classes are largely based on handed-down traditions without much benefit of empirical corroborations about their effectiveness. Given that technology has shifted the entire terrain of communication, this approach simply does not make sense any more. Similarly, although we have operated with cases, simulations, and experiential exercises, in addition to textbooks, assignments, lectures, and discussions, we have never systematically examined in depth communication techniques that would effectively unravel specific knowledge easily for our students. The type of inquiries commonly available for school teachers about what techniques have been proven to be effective in the classroom (e.g. Ball, Hill, & Bass, 2005; Lemov, 2010; Shulman, 1986) has been scarce in management. These and such limitations can be now redressed with the proposed comprehensive model.

Teachers of management have long used case studies that required prior preparation by students followed by intense classroom engagement. The rest of the educational community appears to be independently discovering the same techniques and referring to them with a new label, 'flipped classroom.' (e.g., Pierce & Fox, 2012; Smith, 2013) It has to be obvious from the proposed CFMLE that the 'old' case method and the 'new' flipped classroom are really a particular design or genre of educational design, albeit with some variation within it. The classic Harvard Case Method (Barnes, Christensen, & Hansen, 1994; McNair, 1954) would not be identical to the method used in the flipped classroom in Physics for Biology undergraduate majors (Smith, 2013). Research employing CFMLE in all these diverse areas to tease out systematically the more effective features and practices leading to better learning outcomes has the promise of unlocking and opening creative mixes never before attempted in management education. Thus, CFMLE offers the possibility of launching new and creative mixes of educational designs based on proven and verifiable techniques instead of just based on tradition.

More Immediate Impact for Practice

While the research and its results might take some time to materialize, the lessons from managing innovation leave us with immediate guidance for considerable positive changes for education. Based on how humans teach and learn, what Information and Communication Technologies (ICT) can do, and the insights from the innovation research, we know that it would be prudent to deploy technologies differentially to areas they can be most effective.

ICTs can be more reliable and effective than humans for iterative functions and brutal computations. ICTs are also highly effective as repositories for codified information/knowledge and in transmitting the same. They would be much less effective with less codified information and when explaining becomes necessary, especially based on immediate feedback. Humans, on the other hand, have no match to date, or in the near future, for the power of their sensorimotor functions, which are most essential for the most crucial processes of learning. There are deep evolutionary reasons for the differential abilities of machines and humans (Moravec, 1988, 2008; Pinker, 1995).

Such differences can be used advantageously for designing the three presences of the CoI framework, and, now also of the proposed CFMLE. In summary, ICTs would be most useful, therefore, for coordination, moderately useful for information, and less useful for synergy. Humans would be vice versa. Based on this, professors can fruitfully concentrate almost entirely on the human dimension of the learning process where the need for instantaneous back and forth using the full capacity of the sensorimotors cannot be outsourced to computers. ICTs can pick up most, if not all, 'clerical' responsibilities and 'repository-channeling' functions.

It is quite within the regime of possibilities to get rid of the introductory lectures explaining the class processes and contents of syllabi. It may be noted that without sit-down or online lectures on booking, security, law, transits, and travel controls, the US airlines managed 700 million passenger enplanements leading to about 800 Billion domestic and international passenger miles in 2009. (The Bureau of Transportation Statistics 2010) Similar techniques can be used also to eschew the handholding throughout the term for assignments. Improved coordination also brings closer many other possibilities, such as for synchronizing sections and for exploiting modularizations. Classes that are well modularized and synchronized not only help make things predictable for students, but also permit the most optimal use of the faculty. The pay back for such streamlining can only be substantial. These possibilities above are just practical examples. Many others are well within reach. A communication centered model shows clearly where and what the degrees of freedom are and what can be accomplished within them.

CONCLUDING COMMENTS

This paper showed how asserting the central role of communication at the core of a comprehensive educational and learning framework could help to link it robustly to the sorely needed learning outcomes. An obvious current limitation of the proposed model is that much empirical work remains to be done. Future research on the appropriateness of new instructional designs for creating the intended presences and the effectiveness of such presences for educational outcome will be helpful in corroborating the proposed model. However, immediate benefits from improving the design of an educational environment can be gained by paying proper heed to what is already known about structuring communications.

We also should recognize here that the proposed model is limited due to its sharp focus around processes of learning and education and therefore, can add only little insight about the external forces from the macro environment, such as from the changes in the educational market and from technologies. The design of the educational environment is certain to be influenced, at times even severely, by these latter forces. As the resource-based view (Wernerfelt, 1984; Wernerfelt, 1989; Wernerfelt, 1995) would have it, it is through proper internal bundling as well as flexible deployment of the resources that institutions can build their true advantage. To that end, to discover new ways to respond to external challenges, the proposed model should serve our educational institutions very well. Strategy researchers would find abundant avenues for future research in examining successes and failures of such institutional responses to external challenges.

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