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Subscription Price: US$ 320/yr

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Rosemary Maellaro, J. Lee Whittington

The business community continues to criticize business schools for the gap between the skills students learn and those needed to be successful at work. Business managers cite the lack of attention that current curriculum places on the development of interpersonal skills. To narrow this gap, business schools should develop interpersonal skills that business managers find most desirable in business school graduates. A two part conjoint analysis study of hiring managers’ preferences identified the importance organizations placed on various combinations of interpersonal skills. The implications of these findings for the design of business school curricula are discussed along with prescriptive recommendations.

Business Etiquette and Professional Presence: Their Role in Managing Accounting Interns

Joseph L. Morris, William R. Simpson, Anna N. Bass

This article provides basic principles of business etiquette and professional presence that employers should communicate to accounting interns when they start work at the firm. The authors’ suggestions for employers are based on recent trends in business etiquette and the experience of one of the authors in coordinating an internship program over a 25-year time period. The article is divided into the following topical areas: general guidelines, professional dress, social behavior, communication, and work habits. Most of the discussion pertains to public accounting firms, but these principles of etiquette and professional presence apply similarly to industry firms and government agencies.

A Longitudinal Review of Labor Relations Coursework in U.S. Business Schools: 1977-2002-2010

David B. Stephens, Robert D. Stephens, John P. Kohl

This study investigates the status of the labor relations course in the undergraduate business school curriculum, comparing the results of our 1977 study with two replications (2002, 2010) of the same survey. The initial survey revealed the course occupied secondary status in the curriculum but cited arguments as to why its importance should be elevated. The 2002 replication showed a continuing decline in the status of the course but showed that related courses in mediation and negotiations were being added. By 2010 labor courses had declined even more but many more business schools were offering related conflict resolution courses, thus allowing students the opportunity to develop critical skills in labor relations and conflict resolution.

Contingent Faculty Members: A Just-in-Time Work Force for Universities

Diane Bandow, Tish Matuszek, Dennis R. Self

Virtually no theoretical framework has been developed to enhance understanding of contingent faculty and work behaviors from the individual or organizational perspective. Little is known about this temporary work force increasingly providing education to students, because there is a paucity of research literature to inform scholars, administrators, and other stakeholders of higher business education. Universities cutting costs are relying more heavily on the just-in-time work provided by contingent faculty members. The purpose of this paper is to explicate the profile of contingent faculty as defined by available literature and the multiple issues related to the increased use of contingent faculty.
Measuring the Satisfaction of International Postgraduate Business Students of a British University
Ge Gao

This paper aimed to measure the satisfaction level of international postgraduate business students of a British University. The research focused on the core service delivery of Higher Education - teaching and learning. A two-stage methodology was adopted incorporating a quantitative survey and qualitative semi-structured focus group interviews. The importance-performance analysis (IPA) framework was utilized as the research instrument. The findings revealed that the performance of the Business School was generally below the expectation of students. The IPA matrix has presented the university policy makers with some practical resource allocation strategies. It is suggested that quality improvement efforts should focus on the following areas: student education, student feedback and service recovery, total quality initiative, and staff motivation and development.

Bridging the Theory-Application Gap in Undergraduate Management Education
Kathleen Mays, Don Daake

This empirical study tested the existence of the theory-application gap in undergraduate management education based on professor beliefs about theory and application emphasis as well as reported behaviors on the use of theory and application techniques. Quantitative results confirm the existence of the gap by showing distinct differences in beliefs regarding appropriate emphasis and actual pedagogical techniques used. Qualitative results offer insights regarding the nature of the theory-application gap, as well as creative ways professors are bridging the gap with specially designed assignments and activities in the classroom.

Compliance Costs of Individual Income Taxation: Some Empirical Evidence from Portugal
Cidália Mota Lopes, José Xavier de Basto, António Martins

The purpose of this paper is to evaluate the compliance costs of Personal Income Tax in Portugal as well as its main determinants. In 2007, a survey of 350 individual taxpayers was carried out in Portugal to evaluate compliance costs for the fiscal year of 2006. This paper presents the results of that survey, as well as the main determinants of compliance costs in Portugal. The results show that compliance costs of personal income taxation are related to the number of dependents, the level of taxpayers’ education, the economic activity (wage earners or self employed) and income levels.
GUIDELINES FOR SUBMISSION

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The Journal of Higher Education Theory and Practice (JHETP) is dedicated to the advancement and dissemination of academic and intellectual knowledge by publishing, through a blind, refereed process, ongoing results of research in accordance with international scientific or scholarly standards. Articles should combine disciplinary methods with key insight to contemporary issues central to faculty, administrators, and industry specialists. Articles of regional interest are welcome, especially those dealing with lessons that may be applied in other regions around the world. Accepted manuscripts should make strong empirical and/or theoretical contributions and highlight the significance of those contributions to the higher education field.

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3. Provide an additional outlet for scholars and experts to contribute their research findings in the area of higher education

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Creating and Executing In-Class Exercises to Complement Published Cases:  
“Ice Beer to Japan” Implementation Exercise to Accompany  
Craig’s Asahi Beer Case  
Anne D. Smith  
University of Tennessee  
Joshua L. Ray  
University of Tennessee  

To facilitate conveying to students the difficulties of implementing strategic decisions we offer an in-class exercise developed around a well-known case (i.e. Asahi Beer). Suitable for both capstone-undergraduate and graduate courses in strategy, this exercise allows students to experience the strategic implementation processes on a micro scale. We offer suggestions on time allocation, exercise set-up, facilitating break-out groups, group presentations, and debriefing. Furthermore, we provide suggestions for incorporating various streams of literature (e.g., complex adaptive systems) and offer insights based on our experiences implementing this exercise in classes over time.

INTRODUCTION

In strategy core courses, we are challenged to move beyond student understanding of analytical techniques and generation of feasible strategic solutions toward student understanding of the implementation process of a strategic decision. Certainly, field projects and simulations allow students hands-on experience with implementing decisions (Liedtka & Rosenblum, 1998). Yet, given the substantial amount of classroom time and the strong case orientation in many capstone strategy courses, how do strategy instructors create in-class learning activities that focus on implementation processes? One approach is to create original exercises that allow students to experience, albeit on a small scale, implementation processes. These exercises complement published, long cases and are introduced to the class after a discussion of an assigned case. The implementation exercises take many forms. In Table 1, we summarize some exercises the first author has created to complement published cases.

The motivation for creating implementation exercises is to make organizational situations and outcomes more meaningful to students beyond reading a case and interacting in an instructor-led discussion. Published cases, which are assigned for class preparation, provide students with rich details about a particular organization and competitive situation. We introduce an implementation exercise after spending considerable time discussing the assigned case for that session. After we have analyzed the case situation, identified problems in the case, laid out strategic options, and developed feasible strategic directions, then the implementation exercise is introduced. The class is broken into groups to work through an exercise that is directly related to how strategic decisions, identified at the end of the class discussion, will be implemented.
In this paper, we describe one exercise written by the first author that highlights the implementation aspects of a well-known case – Asahi Beer. This exercise enables undergraduate and graduate students to experience the reality of trying to introduce a new product within different organizational structures. In this paper, we present the exercise, explain how it takes place in the classroom, describe the debriefing, and identify learning outcomes. The intent of this exercise is to provide students with a feel for the reality of implementation processes, in particular how new product ideas move through different organizational structures.

**Asahi Beer Exercise**

New product innovation is a critical issue for businesses today and, not surprisingly, an area of active academic research (Burgelman, 1983; Craig, 1995a; Leonard-Barton, 1992). One of the most widely read case studies about corporate turnaround and new product development is the Asahi Beer Case (Craig, 1995b). This case chronicles Asahi Beer’s transformation – from an also-ran in the Japanese Beer industry to a significant threat to market leader Kirin. This case describes how Asahi changed its organization, structure, and processes to become the innovation leader. Its most successful product Asahi Super Dry changed the norms of the beer industry in Japan; in 1997, Asahi gained top market share among all Japanese beers (“How Kirin Lost its Sparkle”; “Japan Beer Wars”).

For some time, we have used the Asahi Beer case in graduate and undergraduate strategic management capstone classes. The case is usually taught during the second half of the course. The three-hour session is titled “Organizing for Ongoing Innovation.” While the Asahi case provides an intriguing turnaround story, we have found that students have difficulty understanding the uniqueness of Asahi, an organization designed for ongoing innovation. Getting students to understand from the inside how an organization functions is a challenge (Harvey & Morouney, 1998).

In this exercise, students experience how different organizational features can impede or facilitate ongoing innovation. This exercise is introduced after we have discussed the Asahi case. Optimally, you need a three-hour class session to teach both the case and exercise. To completely work through the implementation exercise, you need about an hour and fifteen minutes – 30 to 45 minutes for a group breakout, 20 minutes for informal presentations by three groups, and the remaining time for concluding remarks. You need at least 15 people in the class; the largest class in which this exercise has been conducted is 60 students.

**Setting Up the Exercise**

To begin, the instructor should divide the class into three groups, representing three different companies – Asahi (which is organized for ongoing innovation), Sapporo (whose beer activities are organized in a classic functional organization), and Orion (a small Okinawa-based beer company eager to enter the Japanese mainland). We typically do not assign the same numbers of students for each group. For instance in a class of 40, an instructor could select 6 or 7 students for the Orion group, 10 to 12 students for the Asahi group, and 20 or more for the Sapporo group. Typically, we assign unequal group sizes in order to simulate the ease or difficulty of communicating and coordinating within the different groups.

Each student is given a sheet of paper with the exercise written on it. There are three colors of paper, each representing a different company. The different colors help students to find each other during the breakout. On every sheet of paper (regardless of the company), the front page contains the following statement about the Ice Beer concept:

It is January 1993, and you and several other middle level marketing managers have just returned from a trip to Labatts Beer in Canada. The purpose of the trip was to discuss licensing Labatts Beer for the Japanese market. While you were there, you saw Labatts’ successful launch of its new Ice Beer. You have been in extensive discussions with Labatts’ marketing and operations managers about this new beer product. You have been privy to their current reports, which show a tremendous response to this new beer launch in Canada, a very mature beer market. You cannot wait to get home to investigate if the ice beer concept would work in Japan, but you have a gut feel that this product is a good fit with the Japanese market.
On the plane back from Canada, you and your team are excited about the potential of this product. One manager states, “This could be as big as the Asahi Super Dry product … Let’s get a move on!”

In order to launch this new beer idea in Japan, you need to find the appropriate yeast and mix of ingredients to replicate the ice taste for the Japanese market. Also, and not a minor concern, ice beer requires a significant modification of your existing manufacturing process. Marketing will also have to be involved to substantiate demand for the product and create a new marketing campaign to explain why ice beer is different.

Below are some of the activities and processes related to the launch of Ice Beer (and the functional area involved):

- Develop new yeast (brewmaster);
- Taste test Ice Beer prototype; refine taste (marketing);
- Change manufacturing process (production);
- Train workers on Ice Beer processing (human resources; production);
- Obtain financing for trial launch of Ice Beer (finance);
- Develop advertising campaign for trial launch (marketing);
- Conduct trial launch of product (marketing);
- Gain distributor approval for launch date (sales; distributors);
- Launch nationwide if trial is successful (all functions).

On the other side of the sheet (i.e., on the back of the exercise instructions, above) is a picture of each company’s organization. The Asahi organization (Exhibit 1) is based on Figure 3c in Craig’s Asahi beer case, with twelve employees – five in marketing and seven in production – assigned full time to new product development. The new product development members report to their functional managers, but they are rewarded on successful new products. This permanent team has a direct communication line to top managers for some key decisions. They have a budget to investigate new product ideas and have the authority to request information and help from members of their respective functional organizations. In Exhibit 1, total employees per functional area were estimated given the total number of Asahi employees stated in the case.

Orion is a small, entrepreneurial organizational whose structure is displayed in Exhibit 2. I estimated the total employees in each functional area based on what would be expected in a small firm. In Exhibit 3, Sapporo is shown as a classic functional organization; the distribution of employees is based on information given in Asahi case. Sapporo does not have any mechanisms for continuous innovation. In fact, as stated in the Asahi case, Sapporo in the early 1990s experienced many product failures that reflected its slow reaction to market changes and its lagging market share position in this rapidly changing industry.

**Breakout Group Process**

The three groups meet separately for about 30 to 45 minutes to discuss the exercise. The goal of each group’s discussion is to track how the ice beer idea would move through its organization toward launch. An instructor can mention to each team that one or two students need to keep track of the discussion in order to explain the process to the class. We give each group a copy of its organization and ask them to mark the new product route through different parts of the organization. Each group addresses several questions:

- Identify who you (as a middle marketing manager) would meet with first to discuss this idea upon your return. Describe who would be at this meeting, the objective of the meeting, and possible outcomes.
- Identify when top management would be involved. In other words, when you go to top management, how much work would you have done on the Ice Beer concept?
• What do you see as the main facilitators in your organization to help the rapid introduction of the Ice Beer Concept?
• What do you see as potential stumbling blocks to rapid introduction of the Ice Beer product? List 3 possible stumbling blocks and think about how to overcome them.
• How long do you realistically think it would take to launch this product?

Once students read the exercise and review the organization, they commence their discussion. During the break out, the instructor might visit the three groups and answer any clarifying questions. We also recommend spending a portion of the time during the group breakout observing how each group functions and making note of pertinent comments, body language, and group dynamics.

Based on previous experience, it is likely that you will see similar patterns emerge in the three groups. First, the Sapporo group struggles to get to a decision to launch the new beer or to answer all the assigned questions. With 20 or more students, communication is difficult. It is not uncommon to hear some of the following comments: “What are we supposed to be doing?” “Aren’t we supposed to be working as a group?” “I’m confused” “Will you speak up!” and “What you just said, please say it again for the group.” As compared to the two other groups, there is more visible tension in the Sapporo group, such as: legs shaking, nervous clicks of a pen, helpless looks toward me, arms folded across the chest, and some members just “checking out” mentally. Sometimes, one or two students take control of the group in order to get the exercise completed in the prescribed time.

The Orion team does not function like the Sapporo group. Because the group is very small, the Orion members quickly move through the tasks and questions. It is typical for students to laugh, be smiling, and have very relaxes stances toward other members. This group usually works through the tasks and questions very rapidly. The Asahi team also does not require much time to meet. The mid-level marketing manager returning from Canada would know to turn the idea over to one of the five marketing representatives on the new product development team (a member of the Product Planning area); these five representatives have a direct link to the seven members of the Production Project Selection area. The way that the two groups function is clearly laid out in the Asahi case. The Asahi team acts with confidence and in a relaxed and professional manner, and it usually gets finished with the exercise quickly, which, in turn, increases the anxiety level of the slow-moving Sapporo group.

The instructor can give a ten- then five-minute warning to indicate how much time is left for discussion. Then, reconvene as a class to review each group’s efforts to launch ice beer.

Presenting the Results of Their Deliberations

Sapporo. The Sapporo group presents its results first. Because the group had so much discussion and diverse opinions, it is barely able to address the assigned questions during the breakout period. The student representatives from this group usually present their organization and route (using a document camera); the route usually represents a convoluted process of how the ice beer concept worked its way through the organization. The group’s picture of the new product’s route through the company is usually a mess.

Students should have enough time to present the “story” of their process. Then the instructor or students should begin to probe the students in this group. If the group recommends going to the president first for commitment, you can ask them whether this is really feasible as a middle marketing manager. The first stop usually is to visit the marketing executive. The group recognizes that the idea could die there because the marketing executive may not want to take on this battle for a new product with other functional managers. They usually argue that the marketing executive will talk to and gain the commitment of the production executive; production is the traditional area where new product development has been initiated and taken place in the Japanese beer companies (Craig, 1995a). You then might start asking questions like, “Wonder if the marketing executive and production executive are having a political war? Then what? Would the marketing executive go to the top manager?”

At every movement between functional areas, you can highlight potential problems – such as political battles, poor working relationships, and stalling by other executives. Sometimes, the Sapporo group is clever and develops a task force for this product. While acceptable, the instructor can make them realize that
whoever is in charge of appointing this task force has incredible, maybe too much, power to make an early go/no-go decision about this or any new product idea. Another problem with a task force is that some functional areas send their worse people; the weak members of a temporary task force cannot add great value nor commit to the new product on behalf of their functional organization. Often we will summarize by stating that assigning a task force is not a solution to ongoing new product innovation (Dougherty, 1990).

After this presentation and a few follow-up questions, the class should have a sense of the difficulty of new product innovation in a traditional “functional silo” organization design. Here the instructor can point out that new product development can be stifled and/or dictated by existing power bases and infighting between functions. The class should begin to understand the difficulty of gaining commitment quickly in all functional areas, which greatly slows new product development efforts. Internal difficulties include: functional areas having to constantly go to top management to resolve disputes; top management involved in molding the process; and the sequential, over-the-wall process slowing down new product launch. In the past when we ask group members how long they think it will take to get ice beer on retailer’s shelves; they usually laugh and say several years.

You can end the Sapporo informal presentation by asking them if they found this exercise to be enjoyable. A quick and unanimous “No!” usually erupts from this group! As the presenters from this group are sitting down, we usually point out what we observed in terms of this group’s body language and communication among group members. You can summarize this group’s findings by stating that Sapporo would require a tremendous amount of time to decide to pursue the ice beer concept. Yet, once top management approved this idea, the ice beer launch could proceed quickly to launch due to the tremendous resources at Sapporo’s disposal (e.g., many yeast varieties in stock, financial resources, production capacity, and strong distribution).

Orion. The Orion group presents next. The group usually decides that the middle marketing manager does not need an initial formal meeting. Rather, group members describe a process whereby the marketing managers with the marketing executive sit around table, taste the ice beer brought back from Canada, and review the Canadian data. This group also may call in top managers from down the hall to taste the ice beer product. Because there are so few people in the organization, the process at Orion is usually characterized by fewer back-and-forth interactions between functional areas as compared to the Sapporo group. The decision to launch the ice beer concept is usually reached fairly quickly. The map of the internal maneuvering to launch the product is fairly simple – just a few lines to connect executives from different areas.

The Orion group usually spends most of its time describing how to actually launch the ice beer product, such as: amassing the financial resources, changing production, developing a national advertising campaign, and obtaining mainland distribution. This team has to be creative and work around these significant obstacles. Usually, the group discusses an alliance with a company on the mainland in order to obtain distribution and other resources. If they do not clarify the type of company to pursue for an alliance, you can push them to identify a corporation that might be interested in a joint venture or alliance. Sometimes, a non-alcoholic beverage company is mentioned; other times, the team identifies a food wholesaler. The reasoning is that these companies usually have distribution access to both restaurants and grocery stores. You can also ask them what would be the **quid pro quo** for a firm to allow a small brewer to use its distribution and/or financial resources. Many times, the group members will offer the mainland firm a portion of ice beer profits or an equity stake in Orion. Here is an opportunity to force students to flesh out key aspects of what the alliance agreement would look like.

As the Orion group is sitting down after its presentation, you might point out that these students seemed to have had a much more positive experience during the exercise as compared to the previous group. The Orion group usually agrees. You can then point out that Orion would get quick agreement on pursuing the launch of ice beer through the obvious personal, face-to-face decision-making process among top executives. Here you can point out that the problem with Orion being first-to-market with the ice beer idea is in implementing its decision to launch the ice beer product. It would take months to find, negotiate, and close on a formal alliance with a mainland partner/company. This would significantly slow down its time-to-market for ice beer.

Asahi. The Asahi group presents its organizational map of its process about its product launch last. The team usually describes a process whereby the twelve members of the new product development team worked well together. The group describes to the class how each member of this team could tap into resources from
his/her respective functional areas. For instance, one production project selection member could work with a brewmaster to determine if any yeast varieties are in stock that are close to ones required by the ice beer product; a product planning member could conduct limited taste tests to gauge early consumer reactions. The process of moving from idea to market happens quickly because members of this twelve-person new product development team understand the company’s strategy, have the time dedicated to develop new ideas, and have a direct line to top management if more resources or final approval is needed. If not made clear during the presentation, we typically point out that the twelve-person team is not a temporary taskforce, but a permanent part of Asahi’s structure.

The group’s picture of Asahi’s organization chart is not complicated – a few lines drawn between these two groups (Production Project Selection in production; Product Planning in marketing) then one or two arrows to top management. It should be clear to the class at this point that new product development processes at Asahi are institutionalized in its organization design, structure, and processes. Again, point out how this group interacted with confidence and amicable relations. When asked, the group indicates that it could launch the new product very quickly; between 9 months and 1 year is the usual response. Asahi, we typically conclude, should be first to market with the ice beer product.

Exercise Debriefing: Making the Theoretical Connections

Because debriefing is an important part of the student learning process (Dennehy, Sims, & Collins, 1998), we have organized the important learning points in Table 2 to guide the debrief. First, make a linkage to the strategy-making framework. You can point out that the Sapporo group has a strategy-making process that separates formulation from implementation activities. A final decision to launch the ice beer product takes place after a top-level battle among functional executives, while lower level employees are responsible for implementing the decision. The Orion group also has a separation between formulation and implementation because its executives could make the strategic decision to launch the product, but many of the implementation issues were beyond their knowledge, resource base, or control. Asahi’s strategy-making process was more in keeping with an emergent process; the strategic decision to launch the product emerged from the twelve new product development people. These lower level employees had close customer contact and close connections within functional areas in order to make an informed and rapid decision.

Next, you might lead a brief discussion of the organizational requirements for ongoing new product development, based on recent research findings. First, organizations need the requisite resources such as marketing, operational, and technical skills in order to develop new products within their industry (Dougherty, 1992; Dougherty & Hardy, 1996). For instance, Orion did not possess needed resources, skills, and knowledge, which slowed its ice beer launch and would probably slow subsequent new product development activities. Second, ongoing lateral connections – formal or informal -- are critical to sustained new product development (Craig, 1995a; Dougherty & Bowman, 1995). The lack of ongoing lateral connections severely hurt Sapporo’s ability to be first to market with the ice beer and other new product activities. This also provides an opportunity to bring updated perspectives of organizational structure. Specifically, some instructors might introduce the complex adaptive systems (CAS) view of organizations (e.g., Anderson, 1999; Chiles, Meyer, & Hench, 2004; Choi, Dooley, & Rungtusanatham, 2001; Plowman, Baker, Beck, Kulkami, Solansky, & Travies, 2007) pointing out that the similarities between the ongoing lateral connections and CAS elements (e.g., far from equilibrium states, nonlinear interactions, emergent self organization). Third, ongoing innovation in a firm requires top level trust of lower level employees who are closer to market changes, customer preferences, and company resources and capabilities (Dougherty, 1992; Dougherty & Hardy, 1996). In Asahi, instead of an executive at the top of the organization deciding which products to pursue, a group of twelve employees who understood Asahi’s strategy and had the resources to pursue new ideas were critical to its speed to market with new products. Top management trust of lower level managers also was critical. Broader discussions of leadership within the case and the groups can also be taken up here. Specifically, leadership styles in the group can be compared and contrasted to the CEO styles of Murai and Higuchi. More generally, the dynamics of emergent and charismatic leadership can arise in conversation as well.

If there is time left in the class after some concluding remarks, we sometimes shown a short clip from the “Made in the U.S.A: The Automobile Story.” In a selected 10-minute video clip, it explains the origins of
“functional silo” structures found in the U.S. auto industry; it also shows how this structure slows down new product development processes. The video states that, in the 1980s, Japanese automakers had a much lower development time to market for new designs than U.S. automakers. The students, after undertaking the Asahi implementation exercise, should better understand of the new product development process highlighted in the film and a deeper understanding of GM’s current troubles.

CONCLUSION

Students seem to enjoy this exercise. By their involvement in the exercise, they can begin to understand how Asahi is designed for ongoing innovation and why this company, like the Japanese automakers, was able to have a competitive advantage in terms of its new product development activities in a mature industry. Eventually, Asahi’s competitors did figure out how to organize for innovation. But, by then, Asahi, and the Japanese automakers, already had a substantial lead in several product categories.

In conclusion, we would urge other educators interested in in-class learning about implementation processes to create exercises to complement long, published cases. It does not require much time especially as compared to writing a full-length case. Yet, the potential payback in terms of student learning is immense.

ENDNOTES

1. In this paper, we reference Tim Craig’s Asahi Case (found in the Hill and Jones textbook, 3rd edition), but this exercise works well with Asahi Beer case by Kojuro (Harvard Business School Case #9-389-114). Both cases require students to consider if Asahi will continue to develop new products (Craig case) to fill new plant capacity (Harvard version), especially in the face of formidable competitor Kirin.
2. These two Economist articles are excellent to pass around to students at the end of class -- to provide an epilogue and to show that Asahi sustained its innovation abilities over time.
3. At the time of the case (Craig, 1995b), Sapporo was organized like most Japanese beer companies -- functionally with no lateral connections among departments. Later, Sapporo was able to develop an organizational structure and processes to support new product development (Craig, 1995a).
4. Orion is mentioned in Craig’s Japanese Beer Industry note (Craig, 1995c).
5. Developing a temporary task force is much more likely to be an implementation solution offered by MBA students as opposed to undergraduate students.
6. This “Made in America” video series can be found in the Films for the Humanities and Sciences video catalogue; this series was produced around 1992. The clip that we show from “The Automobile Story” begins about 15 minutes into the film just after the first interview with Maryanne Keller; end the clip with the graphic that shows the blending of four functional areas.

REFERENCES


APPENDIX A: TABLES

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>EXAMPLES OF TYPES OF IMPLEMENTATION EXERCISES TO COMPLEMENT PUBLISHED CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case</strong></td>
<td><strong>Original Implementation Exercise</strong></td>
</tr>
<tr>
<td>Asahi Beer (Craig or Harvard #9-389-114)</td>
<td>“Ice Beer to Japan”: How will new idea migrate through 3 different organizational structures. Which company will be the first to introduce this new beer category in Japan?</td>
</tr>
<tr>
<td>Time Life (Harvard #9-395-012)</td>
<td>“Springboard Stories and Defending His Decision”: How will Time Life CEO break the news of his decision about whether or not to go with the “Crime” series? One group creates a story to defend going with the decision; another group creates a story to sell why the series should not be undertaken. A third group brainstorms on potential product ideas that blend talents from the three divisions; this third group can judge which narrative is more effective in clarifying the decision and the direction for this operation.</td>
</tr>
<tr>
<td>Cineplex Odeon (Lampel &amp; Shamsie)</td>
<td>“Board Meeting”: Three factions set up to decide whether to keep or dismiss CEO Garth Drabinsky: inside managers, institutional managers, and Bronfman group. Role-play and narratives from key players helps one group decide Drabinsky’s fate based on the Board process.</td>
</tr>
<tr>
<td>Outback Steakhouse. Can be used with Jollibees (Harvard #9-399-007), KFC Japan (Krug or Harvard #9-387-043), KFC China (Ivey).</td>
<td>“What to Standardize, What to Modify”: Students meet in groups to decide which aspects of Outback’s domestic operations should be kept and which should be allowed to be modified. A list of business aspects is provided. If the business aspect is not standardized globally, the group provides justification and some guidelines for the non-domestic operations. “International Investment Allocation Decision”: Top managers meet and try to decide how to allocation $200million to building an international presence. Students have to decide and defend where to allocate the funds to grow the enterprise. You might try to create three homogeneous groups: low, moderate, and high international experience. The outcomes are surprising.</td>
</tr>
<tr>
<td>Starbucks (many different versions; I use the Ivey case)</td>
<td>“Sharing Knowledge in Starbucks”: This exercise has changed over the years. The early cases on Starbucks (situated around 1993) focused on three divisions within Starbucks – Director of Alliances, Director of International, and Direction of Knowledge. Given that so many students now know the Starbucks story (i.e., gone international, alliances with Dreyers and Pepsi), we have dropped the alliances and international division role-plays in favor of getting students to try to understand how to share knowledge in a large retail operation. Each group, of which there are three, tries to determine how best to get three great ideas (from three different stores in its system) to be evaluated by other stores. Each group presents and critiques the knowledge sharing solutions.</td>
</tr>
<tr>
<td>Paradise Farm Organics (I wrote this one; found in 5th edition of Hitt, Ireland, and Hoskisson textbook)</td>
<td>“Creating an effective way to have message ‘tip’”: we create four groups after discussion of the “Tipping Point” ideas (Gladwell, 2002) and this case. (Sometimes you might show a video about the organic industry.) Two groups, working independently, try to come up with a way for the organic movement to “tip” – become more mainstream. These two groups develop marketing ideas to get the organic message out, similar to the milk or cotton marketing efforts. Two other groups, working independently, try to figure out how Mary Jane Butters can get her message out – detailed a new catalogue, creating a table of contents for a magazine, mocking up a potential website, and/or developing compelling public releases.</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Sapporo</td>
<td>Formulation and implementation activities are separated. Formulation is characterized by back and forth, over-the-wall processes among different functional executives. Top management intervenes to settle disputes in formulating a decision whether or not to pursue ice beer. Top down strategic decision process to launch the product. Slow to formulate strategic decision, fast to implement with top down plan after top management approval and department buy-in.</td>
</tr>
<tr>
<td>Orion</td>
<td>Formulation and implementation activities are separated. Fast formulation through a face-to-face, personal process among a small group of executives. Implementation is separated from formulation due to the lack of resources to proceed with ice beer launch.</td>
</tr>
<tr>
<td>Asahi</td>
<td>Strategy-making process is emergent. New ideas are developed lower in the organization with minimal top down involvement. Innovation activities are ongoing and jointly worked on by functional areas. No over-the-wall, sequential new product development activities.</td>
</tr>
</tbody>
</table>
APPENDIX B: EXHIBITS

Exhibit 1
Asahi: 1993

Top managers

Marketing Exec.
Marketing SVPs
Middle Marketing Mgrs & Product Planning Representatives (5)
1000 employees in Marketing And Sales

Brewmasters:
Ingredients, Taste, Aging
100 people in this area
1 brewmasters assigned to Production project Selection area

Distribution

Accounting & Finance:
200 people in this area

Production Exec
Production SVPs
Production Middle Managers
Production Project Selection (7)
1500 employees in Production
Exhibit 2
Orion: 1993

Top managers (4)

<table>
<thead>
<tr>
<th>Marketing Exec. (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing SVPs (2)</td>
</tr>
<tr>
<td>Middle Marketing Mgrs (YOU are HERE)</td>
</tr>
<tr>
<td>50 employees in Marketing Area</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brewmasters: (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredients</td>
</tr>
<tr>
<td>Taste</td>
</tr>
<tr>
<td>Aging</td>
</tr>
<tr>
<td>8 people in this area</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distribution</th>
</tr>
</thead>
</table>

| Accounting & Finance: 30 people in this area |

<table>
<thead>
<tr>
<th>Production Exec (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production SVP (1)</td>
</tr>
<tr>
<td>Production Middle Managers (15)</td>
</tr>
</tbody>
</table>

| 100 employees in Production |

(†) Indicates the number of employees/managers in this part of the organization.
# Exhibit 3

**Sapporo: 1993**

<table>
<thead>
<tr>
<th>Top managers (15) in Charge of Beer Division</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Marketing Exec. (2)</th>
<th>Brewmasters: (20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing SVPs (15)</td>
<td>Ingredients</td>
</tr>
<tr>
<td>Middle Marketing Mgrs</td>
<td>Taste</td>
</tr>
<tr>
<td>(YOU are HERE) (40)</td>
<td>Aging</td>
</tr>
<tr>
<td>1000 employees in Marketing Area</td>
<td>100 people in this area</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Production Exec (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting &amp; Finance: 600 people in this area</td>
<td>Production SVPs (10)</td>
</tr>
<tr>
<td></td>
<td>Production Middle Managers (45)</td>
</tr>
<tr>
<td></td>
<td>1500 employees in Production</td>
</tr>
</tbody>
</table>

(\#) indicates the number of employees/managers in this part of the organization.
In Student Partnerships for Innovation in Engineering Entrepreneurship Development (SPIEED) engineering and business students partner to fully commercialize a new technology. In this paper we examine three research questions: What do students learn? How do students learn? Is there net new learning between planning and executing the commercialization of a new technology? We present evidence from student reflection papers that the program enables participants to develop the full range of entrepreneurial competencies. However, the competencies developed in the planning and execution stages appear to differ suggesting the presence of incremental learning. We conclude with the implications of the results.

INTRODUCTION

Engineering educators and policy makers agree that twenty-first century engineers need to be able to address societal problems through innovations and enhanced functionality, work in multicultural environments, understand the business context of engineering, work in interdisciplinary teams, and adapt to changing conditions (Kauffman Foundation, 2008; National Academy of Engineering, 2005; National Science Board, 2007). Polczynski and Jaskolski (2005) have identified two types of engineering, “What-to-do engineering – WTDE” vs. “How-to-do engineering – HTDE.” WTDE is easily codified and as a result most WTDE has been outsourced to low wage areas. HTDE requires tacit knowledge, is not easily codified, and involves competencies that provide engineers with a competitive advantage in the global market place. It is the goal of most programs to train their students in HTDE and many programs have broadened their curriculum in order to accomplish this. These programs have shown that by broadening the experiences of engineering students they develop characteristics valued by employers such as multifunctional communication skills, self-direction, and decision making skills in unstructured situations (Ochs, Watkins & Boothe, 2001; Verzat, Byrne & Fayolle, 2009).
Student Partnerships for Innovation in Engineering Entrepreneurship Development (SPIEED) is a program aimed at developing twenty-first century skills in undergraduate engineering and business students through entrepreneurship training. The key innovation in SPIEED is that students not only create a novel product, design the business plan, but actually produce and take the product to market. SPIEED incorporates successful elements from existing engineering entrepreneurship education programs and adds an implementation component to enhance and broaden the learning experience of a large and diverse population of undergraduate business and engineering students. In SPIEED students: INNOVATE through the development of a new technology, product, or service; become ENTREPRENEURS by actually commercializing the technology, product, or service; COMMUNICATE by developing an ability to articulate and share their methodology and understanding with diverse audience; and SUSTAIN the project by selling their innovation, achieving specified return on investment, and providing additional funds to sustain the project for subsequent classes.

This study addresses three research questions. 1) What do students learn in SPIEED? 2) How do students learn in SPIEED? And 3) is there net new learning that occurs through commercializing an original technology? The results of this study will enable us to enlarge the SPIEED program to provide opportunity for developing entrepreneurial skills to a broader audience and to set SPIEED as a model for developing and evaluating engineering entrepreneurship programs.

Background

Entrepreneurial education research has demonstrated that entrepreneurial competencies are learnable and that entrepreneurial learning has a direct impact on the development of entrepreneurial competencies, thus allowing for intervention through entrepreneurship education (Baron & Markman, 2000; Bird, 1995; Fisher, Graham & Compeau, 2008; Lans, Hulsink, Baert & Mulder, 2008; Timmons, 1995). Fisher, et al. (2008) have defined entrepreneurial education as “the process of providing individuals with the concepts and skills to recognize opportunities that others have overlooked, and to have the insight, self-esteem, and knowledge to act where others have hesitated” (p. 315).

Man, Lau and Chan (2002) have identified six entrepreneurial competency areas from the entrepreneurial competency literature: opportunity competencies (recognizing and developing market opportunities), relationship competencies (person-to-person and person-to-group interactions including persuasive ability, communication, and trust), conceptual competencies (decision-making and innovativeness), organizing competencies (organizing various tangible and intangible resources in developing market opportunities), strategic competencies (setting and implementing strategies of the firm), and commitment competencies (moving ahead with the business/venture).

Souitaris, Zerbinati and Al-Lahan (2007), in their study of the impact of entrepreneurship education on attitudes and intentions of science and engineering students, have found that the entrepreneurship program they studied increased the entrepreneurial competencies of the participants. Fisher, et al. (2008) have found that the program they studied resulted in the development of multiple entrepreneurial competencies in the participants. Peterman and Kennedy (2003) have provided additional evidence by demonstrating that exposure to enterprise education affects entrepreneurial intention. Pittaway and Cope (2007), in their systematic review of entrepreneurship education, have found evidence to support the conclusion that entrepreneurship education impacted student propensity and intentionality. The basic premise of this research stream is that entrepreneurial competencies can be learned, and entrepreneurial education programs in general and engineering entrepreneurship programs in particular are effective in achieving this learning (see reviews of entrepreneurship education research by Dickson, Solomon & Weaver, 2008; Gorman, Hanlon, & King, 1997).

Research on how people learn has identified the need for active learning techniques that help people take control of their own learning. Various active learning techniques have been classified under “metacognition.” Metacognitive approaches have been shown to increase the ability of learners to transfer what they have learned to new settings and events (Bereiter & Scardamalia, 1989; Bransford, Brown & Cocking, 2000; Wiggins & McTighe, 2001). In recent years, entrepreneurial education has demonstrated a shift from more programmed instruction to metacognitive approaches such as experiential learning or
“learn by doing” (Fisher, et al., 2008).

In SPIEED we propose utilizing elements of Problem-Based Learning (PBL), an experiential learning technique. In PBL, students learn by solving problems and reflecting on their experiences. PBL emphasizes active, transferable learning by situating learning in real-world problems and making students responsible for their own learning. Hmelo-Silver (2004) identified the components of a PBL learning cycle. First, realistic and unstructured problems give learners the opportunity to deal with the ambiguities associated with real-world situations. Second, small collaborative multidisciplinary teams allow students to articulate their current understanding vis-à-vis the problem, share knowledge, develop hypotheses about the problem, identify knowledge gaps and negotiate ideas. Third, the teacher, who is also a learner, models and facilitates the learning process. Fourth, Self-Directed Learning (SDL) allows students to generate new knowledge to fill their knowledge gaps, revisit or modify their hypotheses, generate new hypotheses and develop multidisciplinary solutions to the problem. The final component is reflection where students reflect on what they learned, how they learned it, how the new knowledge relates to their prior understanding, and how their learning and problem-solving strategies can be transferred to new contexts.

Hmelo-Silver (2004) has provided evidence of the effectiveness of this experiential learning approach in supporting learning in undergraduate and professional educational contexts. Her review of the research on PBL’s effectiveness showed that PBL is effective in helping adult learners construct flexible knowledge, develop problem-solving and reasoning strategies that are transferable to new problems, develop collaborative explanations of problems, and increase confidence about learning. Hmelo-Silver (2004) has concluded that PBL suggests a method to promote “active and reflective knowledge-building-for-action” (p. 261).

In addition to the research that has demonstrated the effectiveness of PBL in general; many elements of PBL are evident in successful entrepreneurial engineering programs (Creed, Suuberg & Crawford, 2002; Ochs, et al., 2001; Polczynski & Jaskolski, 2005; Rogers & Stemkoski, 1995; Stanford Technology Ventures Program, 2010). These programs engage students in real-world problems. For example, students in the one-year long entrepreneurial engineering program at Brown University turn seed ideas supplied by local parent companies into viable prototypes and business plans (Creed, et al., 2002). At Lehigh University, students work on real world projects that involve developing new products, software or processes in conjunction with company sponsors (Ochs, et al., 2001). These programs are also characterized by students solving real-world problems in multidisciplinary collaborative teams. At Marquette University, students work in “multidisciplinary teams that possess the full range and depth of entrepreneurial skills and knowledge” (Polczynski & Jaskolski, 2005). The multidisciplinary teams at Lehigh University included not only students from multiple disciplines, but also faculty and staff and entrepreneurial sponsors (Ochs, et al., 2001). The Stanford Technology Ventures Program included students from multiple disciplines and the use of collaborative teams in solving “real” problems (Stanford Technology Ventures Program, 2010). Faculty in these programs played multiple roles; however, consistent roles were that of learners and facilitators of the learning process (Creed, et al., 2002; Polczynski & Jaskolski, 2005). Both faculty and students reflected on the learning and experience gained from participation in these programs.

These programs have reported a measure of success with equipping engineers with entrepreneurial skills and knowledge. One common feature of these programs is that they provide training to engineers in the entrepreneurial planning process, including the development of viable prototypes and business plans, but do not give the program participants the opportunity to actually execute the plan by fully commercializing the new product/service idea. While there are a few general entrepreneurship programs that build in commercialization into their programs (see Fisher, et al., 2008, for examples from Clarkson University and Babson College), the majority of entrepreneurial engineering programs do not include commercialization as a part of the program.
Elements of SPIEED

SPIEED incorporates successful elements from existing engineering entrepreneurship education programs and adds an innovative component that is not found in any other undergraduate engineering entrepreneurship program – real-world implementation. The implementation component provides experiential learning for students and allows entrepreneurial programs to become self-sustaining. SPIEED is a year-long course conducted with students experiencing successive and increasingly complex stages of the full entrepreneurial process over the course of one academic year. Each class has eight to ten engineering students and eight to ten business students. The students are upper-division and as such have completed most all the core and all fundamental functional courses in their various disciplines. SPIEED calls upon them to utilize their functional knowledge in successfully achieving the learning outcomes of the program.

The first stage of SPIEED is the formulation stage and is devoted to formulating an entrepreneurial plan. In this stage students are introduced to new technologies and work in multidisciplinary teams to design multiple products with commercial application using the new technologies; select one or more product options among those developed that they believe are most feasible to commercialize and bring to market; and develop a more thorough marketing plan, financial plan, and production plan along with an advanced prototype of the selected product.

The second stage is the implementation stage and is devoted to implementing the entrepreneurial plan developed in the first stage. In this stage, students source for raw materials, manufacture the product, and market the product. They prepare business reports and financial statements that reflect the commercialization effort. The students are the main drivers in this course with the instructors serving as coaches and assisting and guiding them on an as needed-basis.

Using elements from PBL, SPIEED contains the following:

1. Problem – students are introduced to innovative technologies from multiple sources and are charged with turning one or more of the innovative technologies into a viable commercial product or service. They create a prototype, develop a business plan, and manufacture and market the product to achieve pre-determined strategic and financial goals.
2. Teams – students work in collaborative multidisciplinary teams composed of engineering students from multiple specialties and business students from multiple functional areas.
3. Faculty – two faculty members, one engineering and one business, design the program to ensure the achievement of specific learning outcomes and coach the student teams. The faculty members are also learners as they have to grapple with the same uncertainties faced by the students in commercializing an innovative technology.
4. Self Directed Learning – students are in charge of their own learning. They select the technology they wish to pursue, they propose several product ideas and decide on the one they intend to pursue. They develop a business plan with full marketing, financial and production sub-plans. They then execute the plan by producing the product, marketing the product and achieving pre-determined financial and strategic goals.
5. Reflection – students continually reflect on their experiences as they pass through the above process. They produce a number of reports and make a number of presentations throughout the program. In addition, they produce one reflection paper at the end of each stage. In these papers they detail what they learned, how they learned what they have learned, the challenges they faced, and how they resolved them. These reflection pieces are the data sources for this paper.

Methodology

Sample

SPIEED has had three cohorts of 56 students to date. The sample is composed of 23 (41 percent) engineering students, 21 (37.5 percent) females, and 38 (68 percent) underrepresented minorities. The students are upper division engineering and business students, which means that they have completed most of the core courses in their various disciplines.
**Data**

We employed qualitative research methodologies in which we utilized student reflective papers to explore and document student learning. Students wrote reflective papers at the end of each stage of the process. These narratives gave students the opportunity to articulate specific things they had learned and how they learned them, identify positive and negative experiences, and interpret course experiences and the lessons learned. As part of the SPIEED study these reflective pieces were codified into a more systematic understanding of student experience and learning by the researchers. For the qualitative data inductive coding techniques were utilized to develop a coding scheme (Miles & Huberman, 1994). For each session, each reflection paper was initially analyzed in order to gain familiarity with each case as an independent entity. A line-by-line analysis of each paper was performed to see if there were any identifiable patterns such as regularly occurring words, phrases, or concepts, and so forth. “In vivo” codes, the words and phrases used by the students, were identified during the analysis (Strauss & Corbin, 1990, p. 69). We translated these narratives into a codified systematic schema by classifying the modifiers (adjectives, adverbs, emotive language) used into a score per paper. The reflective papers for each session were then combined and coded. We subjected these codes to analyses to determine the entrepreneurial competencies the students learned, how they learned them, and whether or not there was any incremental learning as a result of their participation in the commercialization phase. This project is ongoing, as a result data collection and analysis are continuing.

**Results and Discussion**

We report the results in Appendices A through C below. In Appendix A we report the entrepreneurial competencies the participants developed in the formulation and implementation stages of SPIEED (what SPIEED students learned and “net new” learning); in Appendix B we discuss the processes whereby these competencies were acquired as described by the participants (how SPEED students learned); and in Appendix C we present data on how the experience changed the preconceptions of participants about each other’s disciplines, about the business world, and in general. We present direct quotes from the participants as evidence of our findings.

**What Did SPIEED Students Learn?**

As displayed in Appendix A, the students identified a wide range of entrepreneurial competencies in their discussion of what they learned in SPIEED. We classified these into the six entrepreneurial competencies identified by Man, et al., (2002) and described above. The reflection papers in the formulation stage described opportunity competencies (recognizing and developing market opportunities; Man, et al., 2002) in terms of recognizing and developing market opportunities related to their chosen technology as displayed in the following quote from an operations management student:

> When we were first trying to come up with ideas for the product, we all began talking about problems for commuting students and everyone agreed that parking was the issue. The learning came about when a team member mentioned creating a website that shows the number of available parking spots to help students know where to park. We all built from that suggestion. A teammate mentioned the information would have to be mobile and I mentioned that it should be an application. Another teammate suggested having the application be designed by Computer Information System students. We all suggested great ideas and they were all towards the same goal.

The papers described relational competencies (person-to-person and person-to-group interactions including persuasive ability, communication, and trust; Man, et al., 2002). This was consistent across all the participants. They described in detail learning to communicate with team members, particularly with individuals of different disciplines, backgrounds and functional training. They described learning to negotiate and resolve conflicts. They described the frustrations they experienced as a result of different
individuals viewing the project with different lenses based on their backgrounds. This quote from an accounting student exemplified this:

For instance, the engineering teammates were not as concerned about the economic and financial aspects of production as they were the functionality and appearance of the product itself. While I found myself frustrated that my group members would not inform me of every dollar spent or component ordered, I had to remember that we were looking at the construction of our product through different lenses. Until I explained the importance of accounting for every single penny, they probably perceived me to be annoying and nitpicking. This diversity in our expertise forced us to consider the other members’ perceptions and to figure out how to work together effectively and efficiently. We had to recognize when it was our time to take the lead and when it was time to take a backseat in order to prevent stepping on the others’ toes and to keep our project moving smoothly.

The papers also described conceptual competencies (decision-making and innovativeness; Man, et al., 2002), particularly as was related to creating a product from a new technology. The students described learning to brainstorm and allow multiple ideas to percolate to the top in their ideation process. They described learning to trust each others’ creative capacity. They described facing the challenge of applying their functional training to create a new product. They talked about the immense satisfaction derived from a prototype that actually worked and the disappointment with multiple attempts at designing a working prototype. The quote below from a mechanical engineering student sums up learnings associated with conceptual competencies:

For me the best was when the prototype was working. It was very satisfying to see that the actual idea was feasible. If I was to start over I would forget all the other ideas I had and would go with just this one. The extra time would have helped immensely. However I know that discarding bad ideas is part of the process and unavoidable….but the main problem was that you can’t plan innovation. Sometimes our progress would be extremely fast, other times it would be slow and rife with problems.

Finally, the reflective pieces in this stage identified strategic competencies (setting and implementing strategies of the firm; Man, et al., 2002), particularly as was related to putting together a business plan and all the associated elements.

A large amount of time has been given to the business side of this project as well. This gives me exposure to actual industry business practices such as creating marketing plans, creating financial plans, creating a management structure for our company, and making an overall comprehensive business plan for our company. This has forced me to work on my cross discipline communication skills. (A mechanical engineering student)

The act of developing business plans, financial plans, production plans and so on forced me to think in areas that I had not thought about prior to this class. The scope of business is still beyond me at this point, but I feel that this course provided a culmination of skills that cannot be found elsewhere. (A mechanical engineering student)

Largely missing from the reflective pieces in the formulation stage were discussions of the things the students learned that could be classified as organizing and commitment competencies.

These findings are consistent with the activities the students were engaged in during the formulation stage. The students were primarily engaged in team building and innovating a new product and identifying a market for it. Thus, the reflection papers focused on activities that were classified as
opportunity, relational, conceptual, and strategic competencies. The students were not charged with putting together the organization that would support their product nor commit resources to moving ahead with the business venture. These activities would occur later once they had selected a product.

The reflection papers in the implementation stage described relational, conceptual, organizing, strategic and commitment competencies. The papers did not describe activities that could be classified as opportunity competencies. They also spent less time describing activities that could be classified as relational competencies as compared with the papers from the initial session. The papers focused primarily on conceptual competencies, particularly in relation to product modifications and improvements. This is inline with their experience in the implementation stage in which they had to modify their product and their plans along multiple lines. Ferrofluid, the main component of the initial design, was found to degrade after three months. This necessitated extensive product modifications and use of a new technology. Also, the students were required by the professors to re-incorporate ferrofluid into the product because they did not conduct sufficient testing before abandoning the technology. Again, this required additional product modifications. The schedule in the production plan had to be modified due to delay in the delivery of a major component of the product. The supplier had taken the order but failed to fill it, thus delaying production by three weeks! The marketing plan also had to be modified due to obstacles encountered in the implementation of the marketing plan. Contrary to their expectations, the students did not receive approval to broadcast the commercial they had created for their product on the TVs in the student center. This was an essential component of their marketing plan. They had to develop alternative broadcasting strategies in order to show the commercial.

The relational competencies were similar to those described in the initial session – they learned to communicate with teammates (particularly those of other disciplines), build consensus and negotiate. What was new in the final session was that they learned how to delegate and take initiative. In the initial session, the students had not created a structure to support the venture and as a result did not have specific roles. Once the structure was developed and roles were assigned, there was a need for the functional team leaders to learn how to delegate to teammates. This provided ample opportunities to delegate, on the part of the team leaders, and to take initiative, on the part of the team members. According to the Chief Technology Officer (a mechanical engineer):

I realized that I needed to delegate more work to the other members. It is hard to communicate design concepts or assign tasks when the expectations are unknown; however, the amount of work was beyond my capabilities and required me to trust the other members. The outcomes have been satisfactory, however, and the project has progressed well.

The organizing competencies (organizing various tangible and intangible resources in developing market opportunities; Man, et al., 2002) described by the students focused on creating a functional organizational structure for the venture, assigning responsibilities and creating mechanisms for control and coordination. The students designed a structure and assigned roles consistent with their plan. They learned the importance of specialization, the efficiency of functional specialization, and the need to ensure mechanisms for coordinating the various functions.

It is thoroughly important to divide up teams to work on sections in the business that they either specialize in or volunteer to work in. If there isn’t organization into different functional groups, there would be an entire mess of work that would be overdone or maybe not done at all. Once the teams were split up through volunteering, it was easy to get feedback when work was assigned. Everyone knew the type of work they were getting into when they signed themselves up for their functional group. (A chemical engineering student)

As expected, the strategic competencies in the implementation stage were primarily focused on using the strategic plan as a means of guiding the activities of the venture.
It would be rather juvenile and naïve to think that you could start a business with a trial-and-error strategy. But instead, we were “forced” to write out these plans that were due every other week that encouraged us to write out the detailed steps of every one of our functional group. After seeing what each functional group came up with for the strategic plan and strategic objectives, I realized how set we were in actually carrying out the production of the business. It was entirely amazing how the work that was asked of us, forced us to implement things and push forward in progress in order to meet the deadlines to be ready to sell our product. (A chemical engineering student)

Commitment competencies (moving ahead with the business/venture; Man, et al., 2002) focused on the execution of the plan to move ahead with the business venture. Again, these results are consistent with the need to implement the plan that was formulated in the first stage.

I experienced that it takes a lot of research and preparation to market a new product. Marketing is a big aspect of trying to get the product known, which will ultimately drive sales for your product. The learning moment occurred by me joining the marketing team and actually going through the actions of preparing for the marketing of the product. Different tasks were spread up between the marketing team, but throughout the process, I was able to see all these tasks and also what it took to complete all these tasks. In order to complete most of our marketing plan, a lot of work had to go into it. (An entrepreneurship student)

How Did SPIEED Students Learn?

In evaluating the reflection papers for a description of how the students learned/developed these competencies, we identified three processes whereby these competencies were learned: problem solving, teaming, and working (that is, performing the functions necessary to accomplish the work of the organization). The processes were common in both sets of reflection papers – the formulation and implementation stages. The greatest amount of learning seemed to occur when the students encountered a problem for which they needed to develop a solution. As indicated in Appendix B, the types of problems the students faced in the formulation stage focused primarily on the products they were developing in their smaller teams. The problems in the implementation stage focused primarily on the degradation of the ferrofluid, a major component of the product they had chosen to commercialize, and the need to re-incorporate ferrofluid into the modified product design. The participants identified developing solutions to these problems as major learning experiences for them. According to one of the materials engineering students:

I had a really big issue at the beginning of the quarter when we found out the trouble we had with the ferrofluid breaking down after about 3 months. We had experienced the ferrofluid clumping in the tube when we worked with it last quarter, but we thought it was just a bad batch. But when we researched places to get the ferrofluid from, we learned firsthand that it was just a characteristic of the ferrofluid to lose its silica coating and let the nano-sized iron particles coagulate during the third month after the batch was made. The professor made it a requirement to reincorporate the ferrofluid because she felt we gave up on the technology too easily. It was really cool to see that the R&D Group really stepped up and acknowledged the insert and felt that it could work. I felt relieved that the group came up with a really easy and ingenious simple plan to incorporate the ferrofluid again.

The students also described the learning they obtained by working in teams. No individual had the requisite skills necessary to fully execute the plan; they had to depend on each other and trust each other. The multidisciplinary nature of the project provided the skills necessary to successfully execute the plan.
Combining students of multiple disciplines is an excellent way to learn about business and I feel as if I am better prepared for a future job or even starting my own company. Considering the number of first time business failures, I believe I still have a lot to learn before starting a company, however, going through the process of product development with the purpose of selling and making a profit really provides a realistic business experience. Engineering provides a lot of valuable tools, however, an engineer’s job is only one part of a business and other disciplines play equally important roles. This realization was facilitated through the group work in the class. (A mechanical engineer)

We often needed to work on sections that didn’t involve our current majors. I worked on some of the production sections, and my engineering teammates greatly aided me in the business sections. Of course, we all helped each other. I showed them some of the finance and operations management methodologies I had learned during my past few years at Cal Poly, and they taught me about the engineering techniques that they had learned at Cal Poly as well. For those reasons, I believe that the cross-functional structure of the class did facilitate learning. (A marketing student)

The students also described the process of doing the actual work of the organization as a learning opportunity. This quote exemplifies this point:

I learned so much about marketing and all that gets put into making a new product and trying to get the word out. Because I am a management major, I don’t take many marketing classes and don’t spend too much time on the subject. It has been a couple of years since I took the one marketing class required for my degree, and I didn’t remember a whole lot from that class. Taking this class, I was able to actually get hands on experience to market a product. This is very valuable information for me because I want to own my own company and when it comes to the point that I do actually own my own company, I will have experience in marketing that I would have otherwise not had. (A management student)

How Did SPIEED Students Change?

An important finding of this paper is how SPIEED changed the participants. The students described in both sets of reflection papers the impact of the program on their preconceptions about each other’s disciplines, about the business world, and in general. We provide sample quotes illustrative of these changes in Appendix C. The students described gaining the realization that their respective fields of study, be it engineering or business, is only one piece of the commercialization puzzle. While they may have known this mentally, they actually saw and experienced it.

I learned a little about engineers and the elements they think about when they are creating a product or project. Also all the tools they have to take into consideration when for example they have to seal a product. As a marketing student I think about all the aesthetic elements but I’ve never taken into consideration all the work that has to go into engineering that product for mass distribution. All the prototypes that have to be created until the final one is finally conceived. (A marketing student)

So far this class has been a learning experience like none other I have ever experienced. It gives us, the students, a chance to work on a project that is a representation of what life after school for an engineer might look like. We have to work with many different disciplines and be able to communicate to others our ideas so that everyone can understand. Even with a simple project like this, there is so much to be considered to be able to run a successful business that profits. I think that is what I will take away the most
from this project, to get work on something that is non-engineering related. This gives engineers another perspective of how it is not all about engineering; engineering is just part of the puzzle that makes a successful business. (A mechanical engineering student)

The students described developing an appreciation for the role of other disciplines in the creative process. One of the engineers described learning firsthand the impact of the product’s design on production costs and the resulting change in the way he would approach the design process:

I learned that the marking department in a company is quite important, and that a good marketing team is invaluable. This aspect of the company sets the public opinion, and the ideas from the marketing group were interesting and unique. I learned that marketing requires a lot of creativity, which is necessary to capture the attention of our customers. Learning the financials provided several learning moments. Finances are extremely important, and the concept of ‘making money on the buy’ changed the way I approach the design process. The design process directly affects the financials of a company, and working with the finance department helped enforce this concept. Sharing numbers between officer members allowed group input to take place on reducing costs and allocating funds.

The students described experiences that were life affirming.

All in all this class has given me more hope about my future than any other class I have taken in my academic career. This class was more than I expected. I had trouble looking around for a senior project to jump onto, since none had enticed my interests. The only thing that I had wanted to do at Cal Poly, or for my future, was to work with other people of different disciplines, bring together our knowledge and creativity from our areas of expertise, to work together to solve a worldwide problem. This is what is important to me, and I feel that this class is a HUGE stepping stone to getting me where I need to be. (A materials engineering student)

I am a Management and Human Resources (MHR) major with an emphasis in entrepreneurship so it is very important for me to know what processes it takes in order to open a business and build it from the bottom up. I am working with many other people and we are learning this process together. There are going to be some hurdles to get over, but if I can learn about this process now, many of the mistakes I might make when I start my business might not be made. (An entrepreneurship student)

Conclusions and Implications

This study has demonstrated that the SPIEED program enabled the participants to develop the full range of entrepreneurial competencies by allowing them to not only formulate an entrepreneurial plan but to also fully implement the plan. During the formulation stage, the students, in their reflection papers, primarily focused on opportunity, relational, conceptual and strategic competencies. During the implementation stage, the student reflection papers mostly focused on relational, conceptual, organizing, strategic and commitment competencies. Experiences that could be classified as opportunity competencies were largely missing during the implementation stage while experiences that could be classified as organizational and commitment competencies were largely missing during the formulation stage.

For the competencies that were repeated in both phases (relational, conceptual and strategic), the focus of the reflection pieces differed. Relational competencies in the formulation stage emphasized learning how to communicate with individuals of different disciplines, learning how to negotiate ideas, and learning to trust team members and respect their expertise. While all of these elements were still
present during the implementation phase, the students also indicated learning how to delegate and how to take initiative. Conceptual competencies in the formulation phase focused on ideation and prototype development; whereas in the implementation phase, the reflection papers focused on problem solving particularly as it related to design modifications. Strategic competencies in the formulation stage focused on developing a business plan, while in the implementation stage it focused on using the plan as a guide for organizational action. The results demonstrate the presence of “net new” learning for the participants during the implementation phase. Most engineering entrepreneurship programs provide training in the entrepreneurial planning process, including the development of viable prototypes and business plans, but do not give the program participants the opportunity to actually execute the plan by fully commercializing the new product/service idea. Although students do learn and develop entrepreneurial competencies during the formulation stage, they would benefit by gaining greater depth in the competencies they developed in the formulation stage and acquiring additional entrepreneurial competencies such as organizing and commitment competencies through executing the entrepreneurial plan they have developed.

The results also provide support for the efficacy of Problem Based Learning (PBL) in the context of entrepreneurial training. The results suggest that putting students in multidisciplinary teams to solve real world problems provides an effective learning environment. SPIEED participants seemed to indicate that they learned by having to actually solve a real problem (problem solving), by working in multidisciplinary teams (teaming) and by actually doing the work (for example, having to actually market a product enabling them to learn marketing skills). These are all important elements of PBL.

The results indicate that in addition to developing entrepreneurial competencies, SPIEED participants also experienced changes in their preconceptions. The students had preconceived ideas about each other’s disciplines. While we did not collect data to identify what these were, their reflection papers indicated that whatever their ideas were about each other changed during the program. Engineering students developed an appreciation for the business disciplines while the business students developed a better understanding of engineering and the product design process. In addition the participants learned about themselves and whether or not they had the requisite skills to succeed as entrepreneurs. The program gave them confidence about their entrepreneurial capacity and their ability to work successfully in a multidisciplinary team.

The results of this study have important implications for entrepreneurial engineering education. First, policy makers and educators agree on the need for future engineers to be able to work in multidisciplinary teams, respond to customer needs, and work with ideas and innovations in non-engineering disciplines (Kauffman Foundation, 2008; National Academy of Engineering, 2005; National Science Board, 2007). SPIEED provides a workable model to inculcate these skills and characteristics in engineering students, thus producing engineers with the necessary skill sets to compete in the twenty-first century. Second, educational institutions and entrepreneurship education researchers realize the need to develop more efficacious ways to instill HTDE entrepreneurial competencies in future engineers (Creed, et al., 2002; Ochs, et al., 2001; Polczynski & Jaskolski, 2005). The SPIEED model demonstrates an effective method of inculcating HTDE entrepreneurial competencies in students who will become future engineers. Third, businesses value engineers with both technical and “soft” management skills (Ochs, et al., 2001). In SPIEED, students develop and apply both technical and “soft” management skills. The results of this study, by demonstrating the effectiveness of SPIEED in developing entrepreneurial competencies, will inform the design of entrepreneurial engineering programs that produce technically competent engineers with twenty-first century entrepreneurial skills and extend the body of entrepreneurship education research.

REFERENCES


**APPENDIX A**

**ENTREPRENEURIAL COMPETENCIES IDENTIFIED FROM REFLECTION REPORTS SUBMITTED BY SAMPLE IN THE INITIAL AND FINAL SESSIONS -- WHAT STUDENTS LEARNED IN SPIEED**

<table>
<thead>
<tr>
<th>Entrepreneurial Competencies</th>
<th>Formulation Stage Sample Quotes</th>
<th>Implementation Stage Sample Quotes</th>
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</table>
| "Opportunity Competencies (recognizing and developing market opportunities)" | Each group has had to take their product from just a simple idea through all the engineering and business processes and have a marketable finished product at the end. This project has enabled me to more clearly see all the steps involved in taking an idea and forming it into something tangible. Even being a business major I didn’t know all the steps and plans required to move a new product into the market because I have only ever read about them. | We had no idea what we should come up with. We had three product ideas, and it was especially
sad to see them end before we even got a chance to work on them. Once we found our snap tool idea though things became much more efficient. Everyone seemed to be more comfortable especially because we were all on the same page now. Once we got the idea down all of us started taking on roles and things started happening.

As for the course itself I found it to be excellent even though at first I felt out of place. It may sound sexist, but it was amazing enough that there were girls in my class. In mechanical engineering this was a rarity. But with introductions I got to know a little about everyone else and it helped when we first picked groups. The introductions definitely smoothed things over, got us talking about what we liked and what we cared about and it definitely got the ball rolling in terms of me meeting my teammates.

I’ve learned how to communicate my engineering ideas, how to work in a non engineering team and the steps required to sell an idea. I learned so much about business and teamwork skills outside of engineering and I know all of this will be extremely valuable when I leave college. After all in the real world I won’t be working in an insulated lab. Eventually, I will have to talk to people outside of the engineering discipline and plan with them and it’s very helpful that I’ve learned how to do it early on.

From an engineering standpoint there have been a number of things to be done on this project as well as learning how to effectively communicate these ideas with my non-engineering group members. Learning how to effectively communicate with non-engineering majors will be a huge advantage when it comes to being in the working world. The engineering side of this project, combined with the business side of things makes this project incredibly valuable due to the exposure to real world conditions and challenges.

The most valuable lesson I learned was to do as much brainstorming as possible in the beginning stages of design. Being as creative as possible is extremely important as it is one of the fastest ways to solve problems and allows for many options to develop simultaneously. It seems that it is better to have too many options than not enough, although it does require significant focus and diligence to narrow down ideas and assess their feasibility. Trusting others to develop creative solutions significantly helps this process and allows the group to function as a think-tank.

I noticed that the production team’s main goal was to develop the best product, while the finance team was more concerned with cutting costs and staying within the budgets. These differences forced each team to constantly communicate with one another and come to a consensus. The production team had to compromise some of the product goals they had established, and the finance team had to avoid being too cheap. Once we had reached this consensus, we found the best alternative for the organization, as a whole.

I realized what was going on the whole quarter, and was grateful I decided to take initiative towards the middle of the quarter, and not sit back and wait for the officers to get me to do something. What motivated me was the knowledge that even though I wasn’t an officer and others were, I was just as equally responsible as them in getting the project done, and we all technically should be doing the same amount of work.

We also overcame one last design change when we were tasked with re-incorporating the ferrofluid back into the design. More people in the group collaborated on this and we were able to find a feasible solution that added appeal to the clock without taking away from its fancy look. The other exciting thing is that the ferrofluid insert is actually located in the extension at the bottom of the clock which gives the clock its tilt. An extension that may not have been there, had I not suggested adding the feature, so that was satisfying. The design aspects of building and
throughout each phase of product development. The earlier group members trust each other to think creatively and welcome individual ideas, the better the group dynamics later on.

I have never created an entire Business Plan, and by going through the steps in this class, I was able to see how much work was needed to build a product from scratch and collect all the information needed to make sure the design, production, marketing, financial, and business aspects of this product in order for the company to run smoothly.

So far in my education we had learned a lot of technical aspects of engineering but we were barely challenged to bring our ideas to an actual market. This meant we could be wasteful, go over budget, and basically just guess whether customers would even buy our fake products. Actually making a product to sell and working with other non engineering majors seemed better than doing more experiments in the lab.

Organizing Competencies (organizing various tangible and intangible resources in developing market opportunities)

A classmate stood up in front of the class to announce that we needed some sort of corporate structure and departments. We voted on what different departments/teams there would be, we nominated class members to be officers and we did not make an official decision until we had a consensus from the class.

I think the way we assembled the company is part of the success we’ve been having. It was a good idea to have a CEO who is doing an excellent job making sure the company is running smoothly. Also, having a chief officer in different areas is more efficient, since they attend the chief officer meetings and then delegate tasks.

Strategic Competencies (setting and implementing strategies of the firm)

Since, everyone else volunteered to edit and rewrite the other plans; I was left with the marketing plan. Seeing that I’m an engineering major, and know nothing about marketing, this process was a task, and it got me to learn a lot. The marketing plan consisted of different segments where we described in detail what our plans would be. The segment on the product, pricing, promotion, and channel strategies were difficult. I did a lot of research online to see how other companies created their strategies, and saw how they would set up these plots describing their strategy, which could be complex at times. I also learned online the definition of each strategy and

Especially in this last quarter, I learned the importance of planning and having everything written out and edited before any physical action is taken...
what each strategy meant to the companies. I also asked my partners for help, and they encouraged that I come up with basic strategies, and not complex ones. All of this information was very insightful, and helped me know how to finish this segment. The other part of the marketing plan that gave me difficulty was the part that asked us to describe our goals for marketing our product. For this question I had to go online as well, and ask a partner in business to answer this question. Overall, I learned so much about marketing by completing this plan.

Commitment
Competencies (moving ahead with the business/venture)

I experienced that it takes a lot of research and preparation to market a new product. Marketing is a big aspect of trying to get the product known, which will ultimately drive sales for your product. The learning moment occurred by me joining the marketing team and actually going through the actions of preparing for the marketing of the product. Different tasks were spread up between the marketing team, but throughout the process, I was able to see all these tasks and also what it took to complete all these tasks. In order to complete most of our marketing plan, a lot of work had to go into it.

One specific example that describes this learning moment is the research done to figure out where we should set up the table and at what times. Though I was not assigned this task, the fact that somebody, or rather two people, had to sit at different locations and at different times during the day to determine this is time consuming work.

It was a good experience to work with so many different, diverse people to get a product created and ready for production and distribution and all the other factors that go along with it.

I experienced that it takes a lot of research and preparation to market a new product. Marketing is a big aspect of trying to get the product known, which will ultimately drive sales for your product. The learning moment occurred by me joining the marketing team and actually going through the actions of preparing for the marketing of the product. Different tasks were spread up between the marketing team, but throughout the process, I was able to see all these tasks and also what it took to complete all these tasks. In order to complete most of our marketing plan, a lot of work had to go into it.

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APPENDIX B

PROCESSES THROUGH WHICH COMPETENCIES WERE DEVELOPED – HOW STUDENTS LEARNED IN SPIEED

<table>
<thead>
<tr>
<th>Process</th>
<th>Formulation Stage Sample Quotes</th>
<th>Implementation Stage Sample Quotes</th>
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<tbody>
<tr>
<td>Problem Solving</td>
<td>The problem was that all of our materials and production processes were expensive, so we had to come up with a way of reducing those costs before we could think of lowering the price of our product. A team member was able to work with two plastic companies to reduce the price of the plastic and also</td>
<td>The ‘aha moment’ that I had, occurred when I realized that the ferrofluid had properties that could not be changed, at least in the time period that we had. The property of the water-based ferrofluid to break down made me realize that this material could not be used as such an integral part of our</td>
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the price of having the plastic itself cut down to 8½ by 11 inch sheets of plastic. By working with the
two companies, he was able to work them against
each other to keep lowering the price for each set of
plastic. Another way we were able to lower the cost
of the product was by lowering the cost of the water
jet cost. Instead of cutting out the pieces of one
sheet at a time, we were able to cut five sheets at a
time. This reduced our costs substantially. All in
all, we were able to reduce the cost of the materials
and production for our product to get it down to a
price we could work with.

My group is currently working on the mug that
contains a phase change material pack. Challenges
I’ve had to deal with thus far have been first
designing a mug that would work as we wanted to.
Then I ran into the challenge of working with a
budget, causing us not to be able to design a cup and
rather having to spec a mug that’s currently
available. This has caused me to have to
communicate with various vendors, about materials
used, cost per item, and dimensions of their product.

An “aha moment” that my group experienced was
with the pop-up design of the snap tool idea. A
teammate mentioned that the tools would fit tightly
in the plastic sheet backing-sheet and that it would
be difficult to get out. At that moment two other
team mates mentioned to add a design of a lip in the
acrylic sheet to make it easier to snap out. We all
looked at each other confused at first, but when they
explained the idea again we all laughed and nodded
our heads. It was a funny moment but also a
problem solving moment as well.

Teaming
I have made new friends that I might not have met
otherwise and I have learned to trust other students
who are the experts in their respective fields.
Consistent communication helped me understand
that it is better to talk about the little details than to
assume that those details will be taken care of
otherwise. I think in the future I will be more open to
ideas and will want to work with other business
professionals in order to learn more about fields of
study that I am deficient in.

This class has taught me how the real world can be.
In the sense that most of the time you will not be
working with people of the same background and
knowledge. I was able to see the different ways
people think about the same problem based on their
knowledge.

Working as a team, which sometimes doesn’t feel
like a team, but really feels like we’re a business.
And I’ve liked that a lot. I feel like we’re accomplishing something more than just an
assignment, because we are. We’re a small
business, engaged in a great work, lead by officers
and hard working employees who are attempting to
make this business successful.

I really enjoyed the democracy we had as a class
starting from the creation of an organization to
deciding what size font to use on the different
reports. I felt that the class had strong chemistry
when we all voted on issues. The officers of the
class such as CPO incorporated the same
democracy when it came to issues in the
production team. She really valued and respected
I think this class taught me a lot more responsibility and team work. I didn’t particularly enjoy team work because sometimes group members aren’t dedicated and then it just becomes harder on everyone. My group was great though and it made working in the group more enjoyable since everyone put in the same amount of passion for trying to create this product that we wanted to present. Group projects work well when everyone in the group puts in the same amount of effort to get it done. I learned a lot more responsibility because I didn’t want to let my team down. I was constantly looking up more information on hot packs and things pertaining to it. I wanted to get as much information for my team as possible and do my part to contribute. After all, I couldn’t contribute much in the financial plan and marketing plan, but I could find out different wants to make the product and different materials to use.

Working

I also really appreciate the exposure that I am receiving through this type of course. As opposed to doing traditional case studies or conceptual research, we are able to gain first-hand experience through the self-taught operation of a simulated business. I have the opportunity to propose objectives and actually work towards attaining those goals alongside my fellow organization members.

When we were putting together our final report, I had no idea what any of the income and balance sheet statements were supposed to look like, nor did I know where to start. By working side by side with other business partners, and compiling the final report together, I was able to learn what each financial statement was supposed to have in it. Now I’ll understand what those statements will mean, and how to prepare them when I start working as an engineer.

As an Engineer I will be forced to deal with materials selection, strength of materials, product design, thermo dynamics, heat transfer, product assembly/manufacturing and engineering communication. I will also bear a somewhat heavy burden as a mechanical engineer because I am only one of four mechanical engineers in the entire class. Also, aside from engineering, I will be exposed to marketing, sales, financial planning and forecasting, creating a business plan, managing cross-disciplinary groups, web design, meeting break even goals, and the overall experience of starting a company.

This is the first time that I’ve had to single handedly work on a financial statement in this manner.

I was given the duty of being CFO for the company—something that I am very proud of! Since I haven’t had experience as a CFO, I feel like I had a lot of learning to do, and this was just the right type of environment to do it in. Personally, I’ve always liked being on the go and having things to do to pass the day. But, because I was new to this CFO position and new to my work position, having a lot of things to do took more time than I originally thought. At the same time, I know that I had a team I had to lead. I think I could have done a better job at training the group members in the finance team about our financial statements.

My role on the Product Development and Commercialization Lab team became Chief Marketing officer. I was in charge of organizing a marketing team of four people. I think this was a real learning experience. Before this quarter, I didn’t realize how difficult it would be to manage people. My learning moment occurred when I separated my team into smaller teams. I learned that many of them weren’t prepared for the hard work required to be a marketer. At times, it became difficult to manage people because I didn’t fully understand their skill sets. I think everyone felt that they might have worked better if they had more time to talk with one another and find out who would accomplish which task based on capabilities.

In fact everyone on my team did a great job. It made me realize how great it is to work in teams. It was especially beneficial because we all came from different educational backgrounds. So if one person didn’t know the answer to something, someone else would know how to find that information. By the end of the quarter, we had a great media plan together. It took a lot of time and meetings and hard work to complete it. I think it was more work than people on my team expected it to be.

Our views and opinions and took them into consideration when we wrote the production plan.

I was given the duty of being CFO for the company—something that I am very proud of! Since I haven’t had experience as a CFO, I feel like I had a lot of learning to do, and this was just the right type of environment to do it in. Personally, I’ve always liked being on the go and having things to do to pass the day. But, because I was new to this CFO position and new to my work position, having a lot of things to do took more time than I originally thought. At the same time, I know that I had a team I had to lead. I think I could have done a better job at training the group members in the finance team about our financial statements.

My role on the Product Development and Commercialization Lab team became Chief Marketing officer. I was in charge of organizing a marketing team of four people. I think this was a real learning experience. Before this quarter, I didn’t realize how difficult it would be to manage people. My learning moment occurred when I separated my team into smaller teams. I learned that many of them weren’t prepared for the hard work required to be a marketer. At times, it became difficult to manage people because I didn’t fully understand their skill sets. I think everyone felt that they might have worked better if they had more time to talk with one another and find out who would accomplish which task based on capabilities.
Usually, I work together with my accounting group members because each of us has our strengths and weaknesses and when we work together we put out great group work, but I found that I really needed to be independent and figure things out on my own. This way, I would fully understand everything that I was doing.

My “aha” moment occurred very recently during one of our group assignments involving finance. Since our accounting teammate dropped the class, I knew that I would be next in line for “doing the numbers”. Honestly, it really made me nervous. Up until the assignment, I never realized that I didn’t know about accounting as much as I thought I did. I got good grades for basic accounting, but when I pulled up the assignment, I realized that I didn’t really understand how to apply what I had learned. I pulled out my old finance book and went through a few chapters in order to write up and organize the requested financial documents. When my group got back our financial draft, I was excited that most of what I had done was correct. In many ways, I’m learning more here than I have ever learned in any of my “real world” internships.

<table>
<thead>
<tr>
<th>Formulation Stage Sample Quotes</th>
<th>Implementation Stage Sample Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>This class is definitely a great and helpful stepping stone from school to the actual business world. I feel much more prepared to take on real business challenges now than I ever have from just purely studying theory. So essentially it’s not just the assignments and requirements of this class that have been informative but the process as a whole. From selecting our product to working with our groups to presenting, everything about this class has given me useful insight and experience that I can apply to my professional career. I know without a doubt that this class has prepared me better for the professional world better than anything else I have done in college.</td>
<td>The organization was too large for me to follow every detail but I trusted that all my group mates were getting everything done. I realized that in a large company I can expect to feel the same way. I had to rely on people I didn’t know extremely well and hope they got the job done. In this case they did but I can see how in companies like Enron, people must have felt extremely betrayed that their fellow coworkers ruined their savings. Along these lines I’ve had adults suggest that I take an “every man for himself” attitude when I get my job and not trust anyone but again I see how this would destroy a company. If on Bronco Time I didn’t trust my teammate to make the best decisions, I wouldn’t put out my best work since I wouldn’t be happy with the situation. I can see that if everyone feels this way in a large organization then that company will not be competitive since its employees will also be producing substandard work. Obviously this is all corporate culture and it taught me why it’s so hard to get right and why it matters so much. The mood at our company is upbeat and the team members are supportive so the clock turned out well. I can see how if there was distrust between members that the clock would be much worse.</td>
</tr>
</tbody>
</table>
As a senior business student I feel as if business concepts are common sense, but since I have been working with other disciplines I realize my knowledge is not so second nature to others. This has been a new occurrence for me considering most of the people I talk to are business students.

I have to say that this quarter, the importance of a good team really hit me. I can also see how goal sharing is important too. If one employee wants a cheap final product and the other wants an expensive one, even if both are working hard nothing will get done effectively since they have opposing goals. The corporate culture is supposed to put everyone on the same mentality to get the same thing done. It just never really made sense to me before why one company with talented people would fail and another would do so great but it really makes sense now how you HAVE to have people who share the same ideals and don’t cheat each other. Only then can you have a productive company that gets things done like we do.

I think that this aspect of working with other people and communicating is sometimes over looked. Something that I used to think is that “with good grades and understanding the concepts of accounting, you can go far”, but it’s not the case. It’s not enough to simply understand rules and principles about accounting, it’s also about working with other people and being able to communicate what needs to be done in order for you and your team to accomplish goals.

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Worldwide information technology (IT) spending is estimated to be over $3.75 trillion in 2011, and IT project management (ITPM) is the driving force behind most of it. Given the substantial resources being invested, it should come as no surprise that ITPM skills are in high demand in today’s job market. Yet the question remains: Are business schools doing enough to prepare students for the ITPM demands that exist in the marketplace? This research seeks to answer that question by examining the ITPM degree programs and course offerings of schools belonging to AACSB International – the predominant accrediting body in business education.

INTRODUCTION

Worldwide information technology (IT) spending is estimated to be over $3.75 trillion in 2011 (Gartner, Inc., 2011) and IT project management (ITPM) is the driving force behind most of it. Given the substantial resources being invested, it should come as no surprise that ITPM skills are in high demand in today’s job market. The importance of project management (PM) skills is reflected by the fact that 43% of respondents to a Computerworld survey said they will be seeking PM skills in their new hires; Monster.com is reporting more than half of the respondents they polled will be seeking project managers (Collett, 2010). In fact, a Monster.com careers expert is advising IT/IS applicants to respond to the hiring trend by adding PM to their resume (DeZube, 2011). As ITPM skills grow in importance to business, so, too, should their importance grow in IT higher education. Yet the question remains: Are business schools doing enough to prepare students for the ITPM demands that exist in the marketplace? This research seeks to answer that question by examining the ITPM degree programs and course offerings of schools belonging to AACSB International – the predominant accrediting body in business education.
One of the constant challenges in higher education is maintaining currency in a highly dynamic, fast-paced, and increasingly interconnected world. This is perhaps nowhere more the case than in the field of IT. Every day, the importance of IT to global business practice increases. Companies spend billions of dollars on IT investments annually. Technology investment and management are larger and larger concerns to businesses looking to their IT organizations for opportunities to reduce costs through the improvement of business practices and/or increase revenues through novel uses of IT that will help them achieve a competitive advantage.

Perhaps the driving force behind the demand for ITPM skills is the fact so many IT projects are not delivered successfully, with “success” defined as delivering a project on time, within budget, and with the promised functionality. If projects are not successful, they can fall into one of two other categories; they are either challenged – meaning that something was delivered, but was either late, over budget, or did not contain all of the promised features – or they are outright failures. As far back as 1994, the Standish Group, an IT consulting company, has been tracking the success rates of IT projects by surveying IT executives. In 1994, the success rate was a paltry 16% (Anderson, Henriksen, & Aarseth, 2007). Over the years, the success rate has steadily risen. By 2006, the success rate had risen to 35%; however, the rate decreased in the 2009 survey to 32% (Levinson, 2009). While this dip is modest, and can hopefully be partially explained by poor economic conditions overall, the fact remains that this is the first decrease in the IT project success rate in quite some time.

Even with improvements since 1994, the fact that only one-third of all IT projects are successful highlights the need for PM improvements in the business and IT curricula. A cursory look through job postings for IT project managers shows that a PM certification is increasingly preferred, if not required, for consideration for PM positions. Indeed, it can be argued that the doubling in the success rate of IT projects seen in the past 15 years can be attributed to the greater infusion of individuals holding such certifications (and, presumably, the knowledge of PM best practices that comes with them) into the marketplace.

IT projects are distinct from day-to-day IT operations management in a number of ways. For example, projects are temporary, have a clearly defined start and finish, and are mounted to achieve change (PMBOK A Guide to the Project Management Body of Knowledge, 2008). These unique attributes of projects require a somewhat different skill set for project managers than those occupying more traditional types of management positions. In particular, project managers must be able to effectively deal with great variability in the human and capital resources dedicated to projects. Furthermore, these resources are often not under the direct authority of the project manager, which requires that project managers have enhanced negotiation skills that might not be required of traditional functional area managers.

Not only does PM require different management skill sets, in some organizations the pervasiveness of project work has led to the adoption of different organizational structures. Although project work certainly occurs in traditional, hierarchically arranged organizations, some organizations have adopted “projectized” structures where reporting relationships and work assignments are arranged entirely around project work. Software vendors who develop custom software for customers often use such a “projectized” structure. Other organizations have adopted “matrix” structures whereby employees report to both functional area managers as well as project managers (White, 2001). Proper education in ITPM includes empowering students with knowledge of the requisite skill sets for effective PM, as well as an understanding of the context in which their work will take place.

So the question remains, is traditional management education providing students with the knowledge they need to be successful in this arena? Although the textbooks of general management courses sometimes dedicate as much as a chapter or two to general PM, this inherently superficial coverage of the topic does not provide business students, IT business students in particular, with the requisite knowledge they need to enter the workplace, even in entry level positions. Traditional operations management and decision science (e.g., management science, operations research) courses touch on some PM issues, but the depth and breadth of the treatment varies widely across campuses and faculty. While decision science textbooks occasionally give attention (often minor attention) to PM issues such as the project life cycle.
and the key decisions and duties of a project manager, the reality of time constraints and the quantitative nature of such courses typically lead to such materials being ignored or given a lower priority. In fact, decision science courses generally concentrate on the continuous and more permanent nature of operations as opposed to the temporary nature of a project. In order to truly provide students interested in ITPM with the skills they need to enter and be successful in the workplace, entire courses – if not degree programs – need to be dedicated solely to this topic. The purpose of this research is to determine the extent to which business schools are meeting this need.

METHODS

In this study, we examine the project management curricular offerings of AACSB International member schools in the United States (US). All AACSB International member schools with membership at the time of the study (4th quarter, 2011) were examined. While project management courses may also be a part of other academic units, such as engineering, this study is specifically concerned with curriculum offerings in the business context. The selection of AACSB International member schools was a natural choice, given this business emphasis. AACSB International is known world-wide as the oldest and best recognized form of professional accreditation for business programs. AACSB International, as suggested by its name, is an international body; however, we chose to limit this study to US based member schools. A preliminary analysis of non-US based member schools raised concerns about the comparability of the data based on variations in the nomenclature used in some cases in describing curriculum offerings.

We included all US based “member” schools in the study. A school may be a member without holding, or even pursuing, accreditation. We identified 480 accredited schools and 175 member-only schools. Some studies (Gambill & Maier, 1998; Apigian & Gambill, 2010) found no differences between accredited versus non-accredited colleges and universities with respect to IT curriculum, but those studies did not focus specifically on ITPM course offerings.

This study focuses on curricular offering. Many institutions have non-curricular offerings in project management. These range from non-credit to extensive professional project management certification preparation courses. It was often unclear where, in terms of academic unit, these offerings were housed. These were excluded from the study.

We examined the ITPM curricula of AACSB International member institutions in order to ascertain the extent to which project management has been integrated into business curricula. We examined degree programs and courses at both the undergraduate and graduate level in order to identify project management related majors, minors, specializations, certifications, courses, etc. While we were especially concerned with ITPM, we also looked for offerings in other business academic units.

The web site of each school was examined to determine whether the business academic unit of the school offered an IT related degree at the graduate and/or undergraduate level, whether it offered an ITPM degree at the graduate and/or undergraduate level, and what project management courses it offered. In addition to direct observation of obvious locations for possible information, extensive searches were conducted using “project management” as the search phrase.

To increase reliability, a list of field definitions was developed and reviewed with all participating observers prior to the start of data collection. The definition information was also available electronically for the research team’s reference throughout data collection. Repeated observations for random schools were conducted and compared to confirm consistency. A database with extensive check boxes, drop downs, etc., was created by the research team to reduce data entry errors.

ANALYSIS

We began our analysis by considering whether the institution offered IT/IS related undergraduate and/or graduate degrees (see tables 1 and 2). We use the term “IT/IS” to refer to the wide array of academic programs related to the delivery of an information system related degree within a business unit. Research indicates that the name of the degree or program within this broad community does not indicate
any difference in the program (Gambill, Clark, & Maier, 1999). A “degree” was defined as a major, an emphasis, a specialization, etc. – essentially any designation that uniquely and separately identified IT/IS as a field of study.

Undergraduate IT/IS programs were identified in 63% of the institutions in the universe. Graduate programs in IT/IS were identified in 34% of the institutions in the universe.

A chi-square test indicated that there was no difference (at the .1 level of significance) in the likelihood of offering either an undergraduate or graduate degree between AACSB International accredited schools and AACSB International member only schools.

**TABLE 1**

UNDERGRADUATE IT/IS DEGREE

<table>
<thead>
<tr>
<th>AACSB Intl Status/Undergraduate IT/IS Degree</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited</td>
<td>315</td>
<td>165</td>
</tr>
<tr>
<td>Member Only</td>
<td>97</td>
<td>78</td>
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</tbody>
</table>

**TABLE 2**

GRADUATE IT/IS DEGREE

<table>
<thead>
<tr>
<th>AACSB Intl Status/Graduate IT/IS Degree</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited</td>
<td>175</td>
<td>305</td>
</tr>
<tr>
<td>Member Only</td>
<td>50</td>
<td>125</td>
</tr>
</tbody>
</table>

The same factor, AACSB International status, was used to categorize ITPM degrees (see tables 3 and 4). The nature of the data did not lend itself to tests of significance; however, there are three points of interest suggested.

First, overall, there are very few degree programs relative to programs in IT/IS dedicated to ITPM at either the undergraduate or graduate level. Given the rising importance of ITPM skills it may be reasonable to suggest that this is, overall, an underrepresentation relative to market need.

Second, it appears that an ITPM program is more likely to occur at the graduate level than at the undergraduate level. This is likely due a combination of factors including the need for foundation coverage at the undergraduate level and the managerial tendency of ITPM.

Third, with the caveat that the data are blurred and statistical analysis is absent, it may be the case that “member only” schools (meaning non-accredited), are more likely to offer ITPM programs. If this modest indication becomes a documented trend it could be suggestive about market responsiveness. In spite of the apparent appeal of “market responsiveness,” it is a double-edged sword. Balancing the need for market sensitivity with the danger of impetuous, “faddish” action has long made curricular design a challenge.

We drilled down on the individual institutions with ITPM programs, at both the undergraduate and graduate levels. In this examination, we discovered that almost all of the institutions with ITPM programs
used either exclusively or predominantly on-line delivery. Also, we discovered that every program with a large number (more than five) courses identified as relating to PM were on-line programs. The number of accredited programs with ITPM degrees was so small that it was impractical to develop a model offering.

**TABLE 3**
**UNDERGRADUATE ITPM DEGREE**

<table>
<thead>
<tr>
<th>AACSB Intl Status/ Undergraduate ITPM Degree</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited</td>
<td>1</td>
<td>479</td>
</tr>
<tr>
<td>Member Only</td>
<td>6</td>
<td>169</td>
</tr>
</tbody>
</table>

**TABLE 4**
**GRADUATE ITPM DEGREE**

<table>
<thead>
<tr>
<th>AACSB Intl Status/ Graduate ITPM Degree</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited</td>
<td>11</td>
<td>469</td>
</tr>
<tr>
<td>Member Only</td>
<td>16</td>
<td>159</td>
</tr>
</tbody>
</table>

While the number of ITPM degree program offerings was small, even perhaps surprisingly so, a large number of schools (307) do make ITPM offerings of some kind. These offerings include both curricular and non-curricular programming.

A general caveat to the analysis is order. While our focus was explicitly on business units, with “units” including schools, colleges, departments, etc., as appropriate to the institution, the line of demarcation between academic areas was often blurred, making the specific “business” identification sometimes difficult. This was especially the case as the program inclined toward either non-traditional or non-credit delivery and/or structure. As a result of this occasional ambiguity, we caution against over interpreting the meaning of individual, discrete occurrences.

**DISCUSSION**

Our findings suggest that accredited public business schools have adopted a different approach to ITPM education than private unaccredited institutions. In particular, private unaccredited institutions are offering more ITPM courses, and they are offering those courses in a predominantly online format. There are several plausible explanations for the differences in course offerings. One is the curriculum adoption process. Changing and adopting a new curriculum is a slow and laborious process within traditional institutions of higher education. This is especially true for accredited schools that must make sure that curriculum changes both conform to marketplace needs and hold up under the scrutiny of rigorous accreditation processes. Kao and Mao (2011) discuss the reactive position this places educators in as they attempt to align the curriculum with this constantly changing environment. New knowledge must be observed and transformed into teachable skills in a timely fashion. Mamun and Mohamad (2009) posit...
the fundamental question of whether today’s business school curricula can produce future corporate leaders armed with the expertise and skills to face contemporary challenges given the increasing complexity and the changing dynamics in this global business environment. Pressure to do so comes not only from students and employers but also from accrediting bodies, alumni, and even legislators.

Another potential explanation is the reliance upon model curricula as a guideline for curriculum development. Educators are aided in their attempts to understand the changes in the business environment by referring to curriculum models developed collaboratively by academics and professionals in their respective fields. Although these models are developed to be helpful, the time it takes for them to be developed and disseminated to the academic community, plus the time it then takes for individual institutions to adopt curricula based upon the model, suggests that there is a substantial gap between the time at which a particular skill is identified as being important to the marketplace and when it will be integrated into curriculum.

The IT field has been guided by such curriculum models since the 1970s when both the ACM (Association for Computing Machinery) and the AITP (Association of Information Technology Professionals) developed model curricula for the computing and information systems/technology fields. Since that time, all model curricula have considered PM as a course to be included in any IT/IS degree program. However, the topics of interest in a proposed PM course have changed over the years. Early versions of the model included PM as a capstone development experience that emphasized more technical skills and focused on design and implementation. However, more recent models have addressed the managerial aspects of ITPM, including the processes of initiating, planning, executing, controlling, and closing a project. Newer models also recognize the complexity of this team-based activity that includes both technical and behavioral skills that may involve resources within the firm or resources contracted from outside the organization. Leadership and group processes are listed as tools that can enhance effective PM (IS 2010 Curriculum Guidelines for Undergraduate Degree Programs in Information Systems, 2010).

Even among the schools that have been aggressive in developing and offering ITPM courses and degree programs, the question remains as to whether the material is being covered in the format best suited to the topic. As we reported earlier, those institutions offering the most extensive list of ITPM courses are doing so in a mostly online format. Levinson (2011) reported on a survey that suggested that the majority of businesses investing in ITPM training found instructor-led classroom training to be the most effective method. The cited benefits of this method of instruction included networking, asking questions, and sharing experiences in a project team environment. Given that most of the schools we identified as offering comprehensive project management degree programs were offering the content in a predominantly online format, our findings suggest that even the institutions offering ITPM content might not be doing so in the most ideal manner.

CONCLUSION

Although curriculum currency is an issue across a wide variety of academic disciplines, it is of particular importance to educators in business disciplines who are expected to educate students in both conceptual fundamentals and state-of-the-art best practices. These best practices encompass a wide range of subject matter, including changing organizational structures, management theory, and technological competence (e.g., the ability to use specific software tools in order to accomplish work tasks). Given the rapidly changing business environment, business educators are hard pressed to maintain the currency of content and thus properly prepare business students for the challenges that await them in the workplace. This research examined one area of the business environment that is changing, the growing emphasis on ITPM skills, and assessed whether business schools are meeting the need. Our findings suggest that the academic response has been varied and that unaccredited private institutions may be offering more ITPM courses and degree programs than their accredited counterparts. This is perhaps due to the more bureaucratic structures that are in place in traditional institutions of higher education and highlights the important challenges facing business schools as they seek to adapt to the 21st century marketplace.
REFERENCES


Developing an Entrepreneurship Curriculum in Egypt: The Road Ahead

Ashraf Sheta
American University in Cairo

This project addresses the need for an institutional program for entrepreneurship education in Egyptian universities. The vision is to foster an entrepreneurial and innovative culture through a world-class curriculum, delivered to the highest standards, in all Egyptian public universities by the year 2014.

INTRODUCTION

The comprehensive endeavor will focus on development and cross-disciplinary integration of entrepreneurship courses, which is the ultimate product, but also emphasize the teaching of critical thinking and innovation as foundation pillars of a developed society and economy. The proposal is developed within the context that entrepreneurship education should be a critical component of any economic development strategy. This is advocated by many international organizations, such as the Organization for Economic Co-operation and Development (OECD), the World Economic Forum (WEF), the United Nations Educational, Social and Cultural Organization (UNESCO) and the European Commission, as a policy imperative.

At the country level, although almost 17% of university graduates in Egypt are involved in entrepreneurial activity, Egypt has one of the lowest penetrations of entrepreneurship education in the formal education system among 31 countries participating in the Global Entrepreneurship Monitor (GEM) study in 2008. Most of the people starting businesses in Egypt are doing this without any formal orientation about the entrepreneurial process or know-how on how to start a business. At the same time, the unemployment rate among Egyptian youth, and particularly so among university graduates, is much higher than the national average, and there is a lack of employment opportunities in the public and formal private sector to absorb the more than 700,000 new university graduates annually. Integrating entrepreneurship education in Egyptian universities will develop the entrepreneurial skills and knowledge of students and better prepare them to develop their own ideas for businesses (including social enterprises) or to secure positions in organizations that provide support to the community of entrepreneurs. Either way, exposure to entrepreneurship curriculum will develop their creative, problem-solving, project development, and innovation competencies.

The initiative is in total alignment with the overall framework for entrepreneurship education previously agreed to between the Minister of Higher Education (MOHE) and the Middle East Council for Small Business and Entrepreneurship (MCSBE). (See Appendix 1 for a copy of the memorandum of cooperation between the MOHE and the MCSBE that was signed in July 2010). The overall framework for development of entrepreneurial skills through the education system targets different educational levels, starting with elementary schools all the way through preparatory, vocational, secondary,
undergraduate and post-graduate education (see Appendix 2). However, the current project concerns itself with the university education system.

Several challenges residing in the educational system will need to be tackled while implementing the initiative: the current pedagogical approach to teaching and learning; the number of students; the prevailing misunderstanding about the role of the university in community development; and the gap between education outputs and market needs.

The specific objectives of the project are to:

1. Develop three courses to be initially offered to students in 3 pilot universities: a) Entrepreneurship and Small Business Management; b) Logic and Critical Thinking; and c) Innovation.
2. Over the 5 years of the pilot project, enroll over 100,000 university students in these courses.
3. By the end of the project, introduce the three courses, in a number of faculties, in all 19 public universities (any new ones that are established in the meantime).
4. Provide orientation to faculty members/professors on methodologies for the teaching of entrepreneurship-related courses, including the case-teaching approach.
5. Provide platform for the sharing of entrepreneurship teaching and learning materials, resource materials, entrepreneurship cases, etc., that can be used as foundation for developing additional courses that can form an entrepreneurship track in undergraduate and MBA degree programs.
6. Strengthen linkages between the university and the community of entrepreneurs and entrepreneurship support organizations.

To address the current challenges, achieve the outlined objectives, and provide a framework for future expansion and sustainability, the initiative is built on four pillars:

1. Building awareness (orientation events, workshops, marketing and promotion activity)
2. Capacity building for academia (curriculum development, teaching methodologies, resource materials, case writing and teaching workshops, etc.)
3. Networking and knowledge transfer (exposure to international good practices and expertise, study tours, conferences, workshops, etc.)
4. Feedback mechanisms (assessment of progress and project evaluation).

The implementation of this five-year initiative, running from 2011-15, will be piloted in three of the top universities in Egypt, Cairo University, Alexandria University and Helwan University, universities with a total enrolment of around 500,000 students selected from three governorates. It will involve five faculties from each university (commerce, engineering, economics and political science, agriculture, and science). As the project progresses, more public universities will join the project.

The project will be delivered in three phases. In the first phase (academic year 2011-12), an entrepreneurship and small business management course will be introduced for senior students in their final year. In the second phase during the 2012-13 academic years, a critical thinking course will be introduced for first year students and an innovation course for third year students. These courses will serve as foundations for all other courses taught at the university level. In the third phase (academic years 2013-14), the project will focus on integrating cross-campus and cross-disciplinary entrepreneurship courses, including faculties from the social sciences (e.g. literature and law), and expand to all 19 public universities by 2014. In parallel, a post-graduate degree will be established inside business schools together with specialized entrepreneurship diplomas and certificates.

The curriculum development process will be a suitable venue for challenging the existing norms, especially with the serious initiatives for reform established by the MOHE (e.g. compensation improvements, students finance, standardization, and quality inclusion).
The project also incorporates a large emphasis on capacity building of academicians and professors, through expert workshops, conferences, communities of practice, study tours, instruction in case writing and teaching (a standard form of teaching in the entrepreneurship discipline), etc. In addition, it includes development of an entrepreneurship education portal for sharing of teaching and resource materials, course syllabi, good practice examples, and success stories; establishment of an Entrepreneurship Case Centre that will collect and disseminate case studies based on the examples of Egyptian SMEs and entrepreneurial companies; and linkages with entrepreneurship education expertise in other parts of the world.

The management of the project will be coordinated by a small staff at the MCSBE, working in partnership with the MOHE and the participating pilot universities. Oversight on implementation of the project will be provided by a National Committee represented by senior officials of the partnering institutions. This Committee will meet on a regular basis. Each of the pilot and participating universities will assign a focal point or project champion for the project, and they will be supported by working groups/committees established to carry out different components of the project.

The ICSB and members in its network of global affiliates (in the US, Europe, Canada, Australia and New Zealand, Korea, Japan, Argentina, Brazil, South Africa, Puerto Rico and the Caribbean, Taiwan, and China) will be the major source of external expertise and identification of good practices in entrepreneurship education (curriculum, teaching resources, faculty development, and case preparation) that can be replicated and/or adapted to the Egyptian context. The European Training Foundation (ETF), an agency of the European Union with a presence in Egypt, will also be a valuable resource.

By the end of the pilot project, over 100,000 university students will have taken at least one entrepreneurship-related course as part of their degree program; at least 90 professors will have participated in professional development activities related to the teaching of entrepreneurship, development of entrepreneurship curricula, and preparation of teaching cases in entrepreneurship and other resource materials; entrepreneurship-related courses will form part of the curriculum of the 19 public universities; and Entrepreneurship tracks will be offered to students in a number of faculties, as well as graduate degrees in Entrepreneurship. The success of the project will be measured against a number of key performance indicators (KPIs). An independent consultant will be contracted to carry out an evaluation of the project’s success against the identified KPIs.

The novelty of the project lies in the fact that it is the first time there is an effort to establish a comprehensive framework for entrepreneurship education in the Middle East region which surely needs to enhance entrepreneurship and innovation culture. This can also be a pilot project for drastic improvements in the educational system, as well as being a model PPP between the MOHE and the MCSBE.

Rationale

The concept of entrepreneurship is not novel to the economic discipline; in fact, its role in economic development has been recognized since the early works of Adam Smith and Joseph Schumpeter. It has, of late, reached great importance at the national level in Egypt for several reasons: individuals aged 18-29 number 19.8 million (nearly 25% of the total population); 700,000 new graduates enter the labor market each year; the public sector is no longer hiring large numbers of new graduates; and the formal private sector is not large enough and growing fast enough to provide employment to these graduates; and the rate of unemployment in Egypt has reached 9.7%. The employment rate for 15-24 year-olds is just over half of the rate for the general labour force-aged population. The unemployment rates for Egyptian youth are significantly higher than the national average, and according to the 2006 Egyptian labour market panel survey, young people with university degrees are the hardest hit. Due to the lack of job opportunities, many of the new graduates will join the ranks of the unemployed or become underemployed in the informal sector or as unpaid workers in family enterprises.

Increasing the supply of entrepreneurs in the country and, specifically the quality of entrepreneurial ability, is important to Egypt’s imperatives of job creation and economic development. Promoting entrepreneurship among university graduates offers them an employment option, and can serve as a
vehicle for developing their ideas into businesses to meet consumer needs, as well as to address social, economic and environmental problems.

There is also growing international attention to entrepreneurship as an efficient and effective solution for fundamentalism and terrorist activity, as highlighted in US President Barack Obama’s speech at Cairo University in May 2008, where he addressed the Islamic world. In his speech, President Obama stressed the need for educational improvements, emphasizing entrepreneurship, innovation and critical thinking as key pillars for the world of the future.

The increasing level of participation of university students in Global Entrepreneurship Week-Egypt activities over the past three years suggests a growing interest in learning more about entrepreneurship, but there are limited opportunities for these youth to gain knowledge about the entrepreneurial process in their formal university education experience. A further measure of the interest in entrepreneurship among university graduates is indicated in the results of the 2008 study ofentrepreneurial activity levels in Egypt (Hattab 2008). The Egypt Entrepreneurship Report 2008, based on the Global Entrepreneurship Monitor (GEM) methodology, revealed that the 18-24 and 25-34 age groups have the highest early-stage entrepreneurial activity rates, at 12.3% and 15% respectively. The large proportion of young people in Egypt’s population thus gives it a strong “entrepreneurial advantage.” Furthermore, 16.5% of adults with a university degree were either actively involved in starting a new business in 2008 or already owned a young business of less than 42 months old. However, only 7.5% of the adult population had ever received any sort of official entrepreneurship education. According to the expert’s survey, conducted as part of the GEM-Egypt 2008 report, 80% of national experts agreed that the education system is one of the top three areas constraining the development of entrepreneurship in Egypt. Compared to 43 other countries in the 2008 GEM study, Egypt ranked 11th in the level of early-stage entrepreneurial activity and last among 31 countries on the entrepreneurial framework condition of “entrepreneurship education.” The implication of these GEM results is an urgent need for an institutionalized entrepreneurship education initiative. The reasons are not limited only to being reactive to the factors of unemployment or the necessity to start a business, but also to help eligible youth to learn in a more creative and freer way. In fact, entrepreneurship education in Egypt is a necessity for moving from a factor-driven to an innovation-driven economy, and also to enhance competitiveness at the macro level, leading to the bottom line effect of improving living conditions.

The rationale behind entrepreneurship education efforts is that entrepreneurship is a learned way of thinking, behaviour and set of skills. Education for entrepreneurship is expected to enhance the supply of entrepreneurs through three mechanisms: it has a cultural effect on student’s attitudes and behavioural dispositions (e.g. mindset aspects); it enhances cognitive abilities to recognize and assess opportunities; and it helps students learn the skills required to start and grow a business (Levie and Autio 2008). Although there is evidence that students who take entrepreneurship courses are more likely to become future entrepreneurs, even if they do not start businesses, they are better prepared for all forms of work. According to the European Commission, entrepreneurship education is a key competence for all young people. By taking part in entrepreneurship program and activities, “students become more willing to take responsibility and to use their initiative, better at developing their own ideas and at channeling their creativity. Therefore entrepreneurship helps young people to be more creative and self-confident in whatever they undertake. It relates to managing one’s own life; to being creative in any working activity; and to establishing and expanding a business successfully.”

The World Economic Forum (WEF 2009), the OECD (OECD 2008, 2009), the United Nations Educational, Social and Cultural Organization (UNESCO) (Masri et al. 2010), and the European Commission (2006), as well as other international and regional organizations, are advocating for the integration of entrepreneurship across all formal levels of the education system.

This project to develop entrepreneurship curriculum and pilot entrepreneurship education approaches in Egyptian universities is consistent with policy prescriptions of these established and highly credible bodies and is very timely.
Project Objectives

1. Develop three courses to be initially offered to students in 3 pilot universities: a) Entrepreneurship and Small Business Management; b) Logic and Critical Thinking; and c) Innovation.
2. Over the 5 years of the pilot project, enroll over 100,000 university students in these courses.
3. By the end of the project, introduce the three courses, in a number of faculties, in all 19 public universities (any new ones that are established in the meantime).
4. Provide orientation to faculty members/professors on methodologies for the teaching of entrepreneurship-related courses, including the case-teaching approach.
5. Provide platform for the sharing of entrepreneurship teaching and learning materials, resource materials, entrepreneurship cases, etc., that can be used as foundation for developing additional courses that can form an entrepreneurship track in undergraduate and MBA degree programs.
6. Strengthen linkages between the university and the community of entrepreneurs and entrepreneurship support organizations.

CURRENT SITUATION

The vision of the ‘Developing Entrepreneurship Curriculum for Higher Education in Egypt’ project is to foster an entrepreneurial and innovative culture through a world-class curriculum, delivered to the highest standards, in all Egyptian public universities by the year 2014.

Local Context

The development of this entrepreneurship education project must take into consideration the existing constraints within Egyptian educational entities, specifically, the financial strategic choice of offering free tuition (creating a large demand for university education); the large number of students (e.g. 235,000 at Cairo University, 175,000 at Alexandria University); and teaching methodologies dependent on memorization and dictation.

The current situation in Egypt is characterized by:

- An overburdened financial system due to limited resources relative to the exponential increase in the number of students
- Hyper-competition due to the existence of privately-owned universities
- Degradation of the ranking of Egyptian universities in the international rankings
- A quest for quality, initiated by MOHE in 2004
- Continuous improvement programs adopted by the MOHE in 2004.

Implementation of the project will face some obstacles, related to:

1. The number of students in each intake (e.g. 5,000 in the Faculty of Commerce)
2. Available venues for lecturing
3. Assessment methodologies followed
4. Overly theoretical background of the teaching staff (with little practical experience in the domain of entrepreneurship).

These obstacles are exacerbated by:

1. The absence of fair and efficient evaluation for staff and students
2. Work-overload and job burnout among staff
3. Low compensation packages
4. The absence of critical-thinking, problem-solving, and innovation skills
5. Weak linkages between academia and the business environment.
The curriculum development process proposed in this project will be a suitable venue for challenging existing norms, especially with the serious initiatives for reform established by the MOHE (e.g. compensation improvements, students’ finance, standardization, and quality inclusion).

In reference to the above-mentioned situation, there is a compelling need to:

- Change the teaching and evaluation methodology for both students and academia into a more objective one in order to comply with accreditation and ranking requirements;
- Strengthen the ties between the university and the business environment through curriculum development and cooperative programs; and
- Broaden the scope of university services to integrate the community with education modules.

There are a growing number of private universities out of the 23 currently existing in Egypt that have started teaching entrepreneurship courses:

- Three courses at the American University in Cairo (AUC) (two for undergraduates, one for MBAs).
- Two courses at the German University in Cairo (GUC) (one for undergraduates, the other for MBAs).
- One course at the British University in Egypt (BUE) for undergraduate students.
- Four courses at the Nile University (NU) (two for undergraduates, the other two for MBAs).

There are also some small business management courses taught at other private universities and English sections at public universities; but the conjecture that the teaching methodologies used for these courses drift them from their original purpose is valid to a great extent.

The number of courses available does not reflect the importance of the topic for real economic development, also there is no available data on the number of Egyptian master’s thesis or doctoral dissertations covering the entrepreneurship topic.

International Context

The mostly advanced entrepreneurship curriculum constituents exist in the US, which has a long history in entrepreneurship education at the tertiary level of education. The first course started at Harvard University in 1948. The American culture is also based on solid foundations for an entrepreneurial mindset.

The George Washington University (GWU) School of Business and Public Management conducted the 1999-2000 National Survey of Entrepreneurship Education in the US, covering content and learning pedagogies using a methodology that identified future methods of teaching to cover the discipline of entrepreneurship (Solomon et al. 2002). Solomon et al. (2002) reported that 1,600 American universities and colleges were offering 2,200 entrepreneurship courses. In addition, there are more than 200 university-based entrepreneurship centers in the US. By 2006, the Kauffman Foundation reported that 5,000 entrepreneurship courses were being taught at 2- and 4-year colleges and universities in the US. However, entrepreneurship education is becoming a global trend. In Europe, universities are collectively offering more than 1,000 courses, but mostly as electives. In Malaysia, 18 universities and colleges in offer Undergraduate Entrepreneurship courses, and universities in China and India are aggressively pursuing entrepreneurship content in their degree programs.

Since 2006, the European Commission has been implementing a major policy initiative to “foster entrepreneurial mindsets through education and learning”. The Recommendation of the European Parliament and the Council of 18 December 2006 on Key Competences for Lifelong Learning identifies the “sense of initiative and entrepreneurship” as one of eight key competences that should be emphasized across at all stages of education and training. Following the European Conference on Entrepreneurship Education in Oslo in October 2006, which presented a wealth of good practice examples, the Commission published the “Oslo Agenda for Entrepreneurship Education in Europe.” The idea was to set out a menu
from which all stakeholders could select items and actions for the appropriate level of education (OECD 2008).

International organizations continue to promote the advancement of entrepreneurship education to address youth employment and economic development issues. This includes the Education Initiative of the World Economic Forum (WEF), which is promoting the importance of entrepreneurship education (WEF 2009); integration of entrepreneurship education outcomes in the enterprise policy framework of the Euro-Mediterranean Charter for Enterprise (European Communities and OECD 2008); best practice and sharing initiatives of the OECD (OECD 2008, 2009); and the UNESCO launch of an Entrepreneurship Education Project in the Arab States 2009-2012, which stresses the importance of adopting entrepreneurship education in the education systems of Arab countries, with a focus on policy and coordination, curriculum development, teacher education and training, equipment and teaching infrastructure, and networking and connectivity (Masri et al. 2010).

Even with these developments, currently, the teaching of entrepreneurship is not yet sufficiently integrated in the curricula of higher education institutions. Available data show that the majority of entrepreneurship courses are offered in business and economic studies, although there is evidence of vastly increasing efforts to introduce entrepreneurship across disciplines (e.g. schools of engineering, architecture, pharmacy, music; faculties of arts and science). Universities in Europe and Asia have, in general, adopted entrepreneurship courses as elective courses at the undergraduate level and rarely offer entrepreneurship as a complete track in post-graduate studies (OECD 2008). The diffusion of entrepreneurship is particularly weak in some of the member states that joined the European Union during and after 2004 (Wilson 2008).

Reviewing international efforts it is clear that entrepreneurship education is still, to a large extent, in its initial phases, except in the US. The challenges faced internationally are very similar to those in the local Egyptian arena. However, the development of entrepreneurship education is evolving exponentially worldwide. The number of courses on the international level is increasing. Also gaining ground is the belief that entrepreneurial economics can be a suitable and effective solution for recurring financial disasters.

**Pillars of Activities**

*Building Awareness*

Due to the novelty of the concept of entrepreneurship education in the Egyptian context, several prerequisites will be needed: 1) consensus among different stakeholders about the importance of entrepreneurship education, 2) awareness about successful entrepreneurs in the Egyptian context, 3) knowledge about available opportunities for institutionalized education, 4) knowledge about extracurricular activities fostering an entrepreneurship culture on campus, and 5) knowledge about available entrepreneurial opportunities, as well as funding and capacity building bodies.

*Capacity Building*

The absence of a profound entrepreneurial culture in higher education has presented the challenge of not having the necessary critical mass of faculty members to teach entrepreneurship courses. Also, the prevailing teaching methodologies hinder creative thinking and individual initiatives, and the binding laws and regulations of universities prevent practitioners from teaching practical courses. These factors have all contributed to the degrading status of entrepreneurship education.

Activities to address these deficiencies will rest on several foundations: 1) designing special programs for capacity building of academics in the field of entrepreneurship, 2) addressing different international schools of thought on entrepreneurship education, 3) facilitating understanding of the different entrepreneurship education specialties, which will be taught at different faculties, e.g. techno-, bio-, and social entrepreneurship, and 4) developing new teaching skills related to the use of case studies and e-learning.

Capacity building workshops will cover the following activities, customized for entrepreneurship, innovation, and critical thinking:
• Application of technology in teaching
• Examination and evaluation systems
• Quality standards
• International publishing of scientific research
• Case writing, teaching and solving
• Competing for research funds
• Effective presentation skills
• Designing an e-curriculum
• Communication skills with NGO’s, business associations and private companies
• Curriculum design, program and course specifications and report
• Academic advising and support in higher education.

Networking & Knowledge Transfer
It is important to provide mechanisms and tools that will secure sustainability for the initiative as well as spreading the concept regionally. This will be done by: 1) arranging periodic meetings for communities of practice at the local, regional and international level, 2) creating an electronic tool for knowledge-sharing and archiving, 3) providing learning opportunities for academia, whether on the local or international level, 4) providing tools for students to share knowledge about successful experiences, and 5) providing hubs for stakeholders working in entrepreneurship.

Feedback Tools
It is very important to assess the development of the project on a periodic basis. This will be done by: 1) hiring a third party to monitor the milestones intended for the project, and 2) providing documents for major stakeholders about the implementation successes or failures in order to adjust actions.

Rationale for Categorization of Project Pillars
The format and categorization of project activities, as outlined above, is extremely important to assure the success of the project. The rationale for the four pillars of the project is based on the following factors:
1. The concept of entrepreneurship in an institutionalized format is novel to Egyptian stakeholders, resulting in the need for extensive awareness campaigns.
2. Activity details will act as a foundation for involvement of different partners, whether locally or internationally.
3. The activities will serve as a hub for all the organizations working in the field of entrepreneurship, to avoid redundant efforts and to provide a platform for sharing knowledge and best practices.
4. Obtaining feedback on the success of the project and its implementation is essential to monitoring the alignment of results with the strategic key success factors (to be secured through a third party evaluation mechanism).
5. Activities will seek continuous improvement, quality and accreditation compliance through international networking and capacity building events.
6. Challenging the existing norm of teaching methodologies requires extensive capacity building activities for academics.
7. Activities will act as a strategic initiative to secure consensus among different stakeholders about the importance of having entrepreneurship as a cornerstone for better life conditions through a bottom-up approach.

Some of the activities will benefit from the promotion efforts of the Entrepreneurship Centers project, creating an efficient and synergistic strategic alliance.
Stages of Development

Development and implementation of the project will take place over the five-year period 2011-15, with development work beginning early in 2011. The implementation of curriculum components, knowledge-development and international best practice linkages, logistics, and benchmarking will be carried out over three phases:

- Phase one 2011-2012 and 2012-2013 (Inception phase)
- Phase two 2012-2013 (Spreading phase)
- Phase three 2013-2015 (Cross-disciplinary and institutional implementation and completion phase).

The progression of the curriculum development components of the project through these three phases is outlined in the table below.

**TABLE 1**

**PHASES OF IMPLEMENTATION**

<table>
<thead>
<tr>
<th>Descriptors</th>
<th>Phase One: Inception phase</th>
<th>Phase Two: Spreading phase</th>
<th>Phase Three: Cross-disciplinary/ university implementation and completion phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>Academic year 2011-12 and 2012-13 (giving enough time to do an assessment of necessary improvements and to demonstrate short-term success stories to motivate other universities to join the project)</td>
<td>Academic years 2012-13 (giving enough time to do an assessment for the pilot project, as well as creating awareness of the basic topic)</td>
<td>Academic years 2013-15</td>
</tr>
<tr>
<td>Target universities</td>
<td>Cairo, Alexandria and Helwan as the 3 pilot universities selected from three different governorates. They have high number of students and faculties, have taken initiatives to promote entrepreneurial activities, and thus have the potential for greatest impact.</td>
<td>The 3 pilot universities plus universities who show interest in introducing the topic to their students (expected 5 more)</td>
<td>The 19 existing public universities, plus any newly established ones</td>
</tr>
<tr>
<td>Target faculties</td>
<td>Commerce, Engineering, Economics and Political Science, Agriculture, Science. These entities vary in interest. Some of them are business-oriented and have been advocating the concept of entrepreneurship culture for some time.</td>
<td>Engineering, Commerce, Economics, Science, Agriculture plus a Social Sciences faculty (e.g. Law)</td>
<td>All faculties</td>
</tr>
</tbody>
</table>
These are mostly related to service industries (commerce, economics). The topic may also be addressed from a specialty perspective, e.g. economics. Others (engineering, agriculture, science) are more practical and technologically-oriented, thus will be more oriented towards technology and bio-entrepreneurship.

| Target students | Graduating seniors (last year). This will encourage students to do a final project that might be applied as a business idea shortly after graduation. The pool of projects, using business idea and business plan competition-oriented formats, will be very useful through close coordination with NGO’s working in the field of entrepreneurship (e.g. Nahdet El Mahrousa, EJB, INJAZ, etc.). | Graduating seniors for the “Entrepreneurship and Small Business Management” course; first year students for the “Logic and Critical Thinking” course; and third year students for the “Innovation” course. | Undergraduate and graduate students from all faculties |

| Curriculum components | The course “Entrepreneurship and Small Business Management” will be developed and offered. The introduction of this one course will be the main pillar for the future phases and a good test of the challenges of changing the mindsets and teaching practices of professors and the reaction of students. | The new course, “Innovation” will tackle the topic according to the faculty specialty. This will help to build a strong entrepreneurial character, and also complement other courses, as well as the core entrepreneurship course. For practical-oriented faculties the course name will be “Innovation and New Product Development” to enhance technological innovation. | Business oriented faculties (e.g. Commerce) will offer a new core track for entrepreneurship (together with the traditional ones like Business Administration and Accounting). |
PROJECT OUTCOMES AND KEY SUCCESS FACTORS

Project Outcomes
1. An estimated 103,500 university students from five faculties at the three pilot universities will take at least one entrepreneurship-related course by 2014.
2. By 2014, an estimated 90 Egyptian university professors will have participated in faculty development activities in the construction and teaching of entrepreneurship-related curriculum (study tours, expert seminars and workshops, etc.), including in the writing and teaching of entrepreneurship case studies.
3. By 2015, an inventory of 150 teaching cases based on Egyptian and Arab region SME and entrepreneurial ventures will be available for use from the Entrepreneurship Case Center.
4. Undergraduate and MBA programs will offer an entrepreneurship track, and graduate students will be able to do a PhD in entrepreneurship from Egyptian universities.

A network of community entrepreneurs and entrepreneurship-support organizations will be built to cooperate with the universities in providing guest lecturers to students (and possibly acting as adjunct professors of entrepreneurship).

The success of the project will be measured against a number of key performance indicators (KPIs). Among the major KPIs to assess the internal and external success of the project are the following:

Key Success Factors
- Internal success factors
- Number of cooperation agreements with international universities for best practices on delivery
- Number of professors delivering curriculum across various governmental universities in the initial phase
- Establishment of an Arabic/English web portal for educational resources
- Number of students enrolled in entrepreneurship-related courses (at the undergraduate and graduate levels)
- Number of research papers published annually in the entrepreneurship domain by Egyptian professors

External Success Factors
- Number of students graduating annually with an entrepreneurship degree
- Percentage growth in the number of businesses established by university graduates nationwide
- Percentage growth in the number of successful businesses
- Percentage growth in the number of patents.

PROJECT MANAGEMENT, DETAILED ACTIVITIES

Project Management
The management of the project will be coordinated by the Middle East Council for Small Business and Entrepreneurship working in partnership with the Ministry of Higher Education and the participating pilot universities. Oversight on implementation of the project will be provided by a National Committee represented by senior officials of the partnering institutions. This Committee will meet on a regular basis. Each of the pilot and participating universities will assign a focal point or project champion for the project, and they will be supported by working groups/committees established to carry out different components of the project. An international consultant(s), with competency in the area, will be contracted to provide technical expertise, advice, and support to the MCSBE and the MOHE in the development and management of the project during the first two years of the project.
The ICSB and members in its network of global affiliates (in the US, Europe, Canada, Australia and New Zealand, Korea, Japan, Argentina, Brazil, South Africa, Puerto Rico and the Caribbean, Taiwan, and China) will be the major source of external expertise and identification of good practices in entrepreneurship education (curriculum, teaching resources, faculty development, and case preparation) that can be replicated and/or adapted to the Egyptian context. The European Training Foundation (ETF), an agency of the European Union with a presence in Egypt, will also be a valuable resource.

**Project Activities**

Project activities are divided into Supporting Activities, and Primary Activities.

**Supporting Activities**

Covering across-the-board activities for the complete duration of the project, including administrative and marketing requirements. Some activities will include shared expenses with the intended project to establish a network of university-based Entrepreneurship Centers (separate proposal being developed).

A portion of the budget will be allocated to the MCSBE for management and knowledge transfer responsibilities to cover the costs of:

1. Project salaries for the Executive Director and staff
2. Establishment of a project liaison office
3. Marketing material
4. National Committee compensation scheme
5. MCSBE administration, management and travel expenses
6. International consultant(s) contract (to provide technical expertise/support to project development and management during the first two years)

**Primary Activities**

Covering all aspects related to the main pillars of the project, and implementation from the pilot phase to expansion and sustainability of the project. These include:

1. Entrepreneurship education knowledge portal
2. Study tours covering entrepreneurship education conferences
3. Establishment of an Entrepreneurship Case Center
4. Annual entrepreneurship education orientation workshops
5. Annual press conference to cover entrepreneurship education activities and developments
6. Local community of practice annual event
7. Regional conference for entrepreneurship education
8. Annual conference for local stakeholders in entrepreneurship education including NGOs, financing bodies and academia
9. Annual workshops done by prominent thinkers in the field of entrepreneurship
10. Annual workshops done by prominent thinkers in the field of innovation
11. Annual workshops done by prominent thinkers in the field of critical thinking
12. A series of workshops to be organized in collaboration with the National Center for Faculty and Leadership Development (NCFLD), the focus of which will be the specialized areas of entrepreneurship, innovation, and critical thinking
13. An annual conference for entrepreneurship and innovation education and research
14. Contract with a consulting agency to assess the outcomes of the entrepreneurship education according to key success factors.

**PARTNERS**

The main participating partners in this initiative are the MOHE, the MCSBE, and the ICSB.
Ministry of Higher Education (MOHE)

Ministry of Higher Education (MOHE) Will Be Represented by Dr. Mohsen Elmahdy Said

Dr. Mohsen Elmahdy Said is a Professor of Mechanical Design and Production, Cairo University, Egypt and an Advisor to the Minister of Higher Education for International Cooperation, Egypt. He was also the former Executive Director and Chairman of the Board, Projects Management Unit at the Ministry of Higher Education, which is implementing Egypt’s Higher Education Reform Strategy.

Dr. Said has held a variety of key positions including: Chairman of the National QAA Committee, President of the Arab Society for QA in Education (ASQAEE), member of the UNESCO Expert Group to develop the guidelines for Quality Provision in Cross-Border Higher Education, member of the Fulbright New Century Scholars Program, Executive Director of the USAID-funded Energy Conservation & Efficiency Project, as well as successfully directing the implementation of a number of National projects in the reform of higher education.

Dr. Said is one of the main international Leaders of Quality Assurance and Accreditation in Majority Muslim countries and the Arab region, and has made immense contributions in areas such as strategic reform planning, restructuring of higher education, quality assurance and accreditation, financing of higher education, internationalization and student mobility, cross-border delivery, human resources capacity building, e-learning, distance education, and other related areas.

Middle East Council for Small Business and Entrepreneurship (MCSBE)

MCSBE is the outcome of the aspirations of a group of entrepreneurs dedicated to the vision of advancing entrepreneurship and SMEs in Egypt and the Middle East. MCSBE is an affiliate of the International Council for Small Business (ICSB) covering Egypt, Jordan, Saudi Arabia and Morocco. The members of the MCSBE include representatives from government bodies, universities, business associations, banks, venture capital companies, donors, consulting companies, large corporations and entrepreneurial companies. Its mission is to advance entrepreneurship and SME development throughout the Middle East and North Africa region. The four theme pillars of the MCSBE are: 1) awareness and culture building; 2) know-how development (including entrepreneurship education and learning); 3) entrepreneur/SME financing; and 4) policy/strategy influence. The MCSBE is the official country host for Global Entrepreneurship-Egypt, working with a large number of country partners to deliver a week-long series of events and initiatives to promote entrepreneurship among Egyptian youth and expose them to entrepreneurial skills and thinking. It is also a partner in the Global Entrepreneurship Monitor-Egypt research project.

The MCSBE Will Be Represented in This Project by Dr. Ashraf Sheta

GM of Shetatex Company for weaving since 1990. With more than 20 years of experience in the field of textiles, he was the former president of textile committee at the Egyptian junior business association (EJB), focusing on the challenges facing SME, s. He is also a founder of the Egyptian textiles technology center, and member of the textile trade center steering committee.

As a board member of the EJB, he served as the head of business environment council coordinating 13 different committees from service and manufacturing industries, also publishing the Egyptian national business agenda in collaboration with center for international private enterprises, also participated in the task force of corporate governance (CG) awareness campaign and issuance of CG code for family business in Egypt. He was a member of the advisory council for transparency and anti-corruption. He served as vice chairman of the EJB till January 2010, and he is adopting an initiative for educational reforms from a business perspective on the national level, Dr Sheta is a board member of the middle east council for small business and entrepreneurship since 2010, he is heading the committee responsible for developing an entrepreneurship curriculum for Egyptian universities, he is also a consultant for the expert in residence initiative EIR at the women entrepreneurship and leadership program WEL developed by Wharton school of business and Goldman Sachs at the American university in Cairo, member of the advisory board for Khazindar case center KCC at the AUC.
On the educational dimension, Dr Sheta has a bachelor degree of civil engineering 1990, an MBA with marketing major 2003, and doctorate of business administration DBA 2008, with specialization in learning organizations, knowledge and performance management.

He was also adjunct professor of management for undergraduate students as well as organizational behavior, performance management systems and contemporary management for MBA students at the Arab academy for science and maritime technology in Alexandria and Cairo. Lecturer of advanced strategic, seminar and thesis courses for undergraduate students and strategic management for MBA students at the German university in Cairo, and is currently adjunct faculty of entrepreneurship for undergraduate and strategic management of innovation for MBA students at the American university in Cairo.

He has started a course for knowledge management for the first time in Egypt at the Nile University’s MOT program on June 2010, where he is also teaching strategic management of technology and small business management. He is advocating enlisting innovation and critical thinking as part of the official curriculum at Egyptian universities, also ethics education on the school and university level.

Dr Sheta is advocating for the fields of innovation management, managing intellectual capital, critical thinking, entrepreneurial economics, organizational learning and learning organization for post graduate studies.

Dr Sheta is certified practitioner of systems thinking from Auckland University, high impact presentation certificate from Dale Carnegie. He is a member of the Arab management association. He is a founding member of the Middle East council for small business and entrepreneurship (MCSBE) an affiliate of the international council for small business (ICSB) in Washington. Certified attendant of international visitor leadership program (IVLP) with specialization in entrepreneurship and small business development program organized by US state department.

Dr Sheta is also an alumnus of Freidrich Nauman institute advocating for liberal thinking, with profound knowledge in lean government and property rights.

**International Council for Small Business (ICSB)**

*ICSB Will Be Represented by Dr. Ayman El Tarabishy*

Dr. El Tarabishy is the Executive Director of the International Council for Small Business (ICSB). Dr. El Tarabishy is currently a research professor in management at the George Washington University's School of Business, where he teaches leadership in the full-time, part-time, and executive MBA programs and leads the primary entrepreneurship and case study methods course for the GW Healthcare MBA program. Dr. El Tarabishy has worked at the World Bank in the Corporate Strategy Group. He helped to develop and manage their technology strategy for the Development Marketplace Program. To date, the Global Development Marketplace competition has disbursed over US $50 million in awards to 300 winning proposals.

**REFERENCES**


**APPENDIX A**

**LIST OF ACRONYMS**

| AUC | American University in Cairo |
| BUE | British University in Egypt |
| CG | Corporate governance |
| EJB | Egyptian Junior Business Association |
| ETF | European Training Foundation |
| NCFLD | National Center for Faculty and Leadership Development |
| GEM | Global Entrepreneurship Monitor |
| GUC | German University in Cairo |
| GWU | George Washington University |
| ICSB | International Council for Small Business |
| ILO | International Labor Organization |
| KPI | Key performance indicator |
| MBA | Master of Business Administration |
| MCSBE | Middle East Council for Small Business and Entrepreneurship |
| MOHE | Ministry of Higher Education |
| MOE | Ministry of Education |
| NGO | Non-governmental organization |
| NU | Nile University |
| OECD | Organization for Economic Cooperation and Development |
| PPP | Public Private Partnership |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| WEL | Women Entrepreneurship and Leadership (program) |
What Business Students Really Need to Learn: An Evidence-Based Prescription for Curriculum Reform

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University of Dallas

J. Lee Whittington
University of Dallas

The business community continues to criticize business schools for the gap between the skills students learn and those needed to be successful at work. Business managers cite the lack of attention that current curriculum places on the development of interpersonal skills. To narrow this gap, business schools should develop interpersonal skills that business managers find most desirable in business school graduates. A two part conjoint analysis study of hiring managers’ preferences identified the importance organizations placed on various combinations of interpersonal skills. The implications of these findings for the design of business school curricula are discussed along with prescriptive recommendations.

INTRODUCTION

The business community’s contentions that business school graduates are ill-equipped with interpersonal skills to successfully manage the people side of business are not new (Dvorak, 2007; Hogan & Warrenfeltz, 2003; Mintzberg, 2005; Pellet, 2007; Porter & McKibbin, 1988). These complaints stem from the perception that those who design management education curricula are too far removed from the practical problems that confront managers in the real world (Abraham & Karns 2009; Boyatzis, Renio-McKee, & Thompson, 1995; Fischer & Glenn, 2009; Palomba & Palomba, 2001). Several business schools have recently incorporated classes with the objective of enhancing students’ softer leadership skills (Middleton & Light, 2011; Shipper, 1999; Stern, 2004); however business leaders believe that these efforts have been minimal and have not served to fully develop graduates’ interpersonal skills (Burgoyne & Reynolds, 2002; Pfeffer & Fong, 2002).

While the gap between the knowledge students acquire in business school and the skills they need to succeed as managers has been well-established (Banta, 2001; Clinebell & Clinebell, 2008; Kao & Mao, 2011; Palomba, 2001; Pfeffer & Fong, 2002; Porter & McKibbin, 1988), critics do not want a completely redesigned curriculum that would decrease the current focus on cognitive and technical knowledge. Rather, they want additional emphasis on the practical, behavioral aspects of management (Doria, Rozanski, & Cohen, 2003) that would equip them with the necessary “workforce-relevant skills” (Fischer & Glenn, 2009). The goals and purposes of both management education and the business community will be better served if business students acquire analytical business knowledge and interpersonal skills.

To address the issue and actually narrow the gap between business graduates’ hard and soft skill development requires that business programs effectively integrate the development of interpersonal skills
with the analytical tools typically acquired in current coursework. To accomplish this business faculty must actively engage with the business community to design a curriculum that meets their needs (Abraham & Karns, 2009; Levenburg, 1996).

The purpose of this study is to provide an evidence-based approach to closing the gap between the business curriculum and the expectations of hiring organizations. We conducted a study to discover the interpersonal skills identified by practicing managers as most important for success in the context of their organizations. Specifically, our investigation was designed to answer this question: Which combination of interpersonal skills is most desired in MBA graduates by hiring managers?

INTERPERSONAL SKILLS

The most frequent suggestion for MBA curriculum reform centers on the need for students to develop a full range of interpersonal skills. Many managers who are considered technically and professionally competent often have limited success due to deficiencies in relationship skills (Goleman, 1998; Hayes, 2002). While management educators may agree that effective interpersonal relationships are critical to managerial success, they also acknowledge the complexity of developing these skill sets (Mintzberg, 2005). The complexity is due in part to the fact that using an interpersonal skill does not consist of a single action, but rather is an integrated set of behaviors (Boyatzis, 1982). Successful relationships with employees cannot be established or maintained simply by using formulaic behaviors or applying a prescriptive model of managerial actions because each interaction is unique, nonroutine, and at times unpredictable (Hargie & Dickson, 2004; Mintzberg, 1973; Wright, 1996; Wright & Taylor, 1984). As managers discern various nuances in the course of any given interaction, they develop a different appreciation of the situation. As the interaction evolves, producing a satisfactory outcome requires the ability to think on their feet and try a different approach (Bigelow, 1991; Hargie, 1997; Wright, 1996). This suggests that a contingency approach to interpersonal effectiveness would be most appropriate; therefore managers must have a large repertoire of interpersonal skills from which they can draw as the situation demands (Bigelow, 1998; Hunt & Sorenson, 2001; Ivey, 1988; Wright & Taylor, 1984).

### TABLE 1
INTERPERSONAL MICROSKILLS FRAMEWORK

<table>
<thead>
<tr>
<th>Negotiating</th>
<th>Nonverbal Messages</th>
<th>Presenting Info/Explaining</th>
<th>Influencing</th>
<th>Working in Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information-Getting</td>
<td>Helping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Definition of purpose</td>
<td>17. Probing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Content &amp; coverage</td>
<td>18. Giving feedback</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Sequencing</td>
<td>Listening</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Probing</td>
<td>22. Preparing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Closure</td>
<td>23. Attending</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24. Following</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>25. Reflecting</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In order to determine the repertoire of interpersonal skills necessary for success, we used a framework of microskills (Hayes, 1994) as the basis for our study. Microskills are identifiable, discrete behavioral units that are manageable, learnable dimensions of more complex behaviors that lend themselves well to interpersonal skill development (DeCormier & Jobber, 1993; Hayes, 1994; Ivey & Simek-Downing, 1980). Hayes (1994) identified these microskills as necessary for interpersonal success after working with managers who were technically qualified but lacked interpersonal competence. This framework of 28 microskills (see Table 1) is arranged within eight broad behavior categories that create a comprehensive “hierarchy of smaller behaviors, each of which contributes in part to overall performance” (Hargie, 1997, p. 8).

**METHOD**

The goal of this study was to identify the preference of hiring managers as to the ideal combination of interpersonal skill competencies for MBA graduates. Not all management candidates come equipped with expertise in all of the interpersonal skills that hiring managers might desire; therefore it was important to learn what trade-offs hiring managers were willing to make among these interpersonal skills. With this in mind, it was important to select a response format that fits the issue. For instance, if respondents were asked to indicate the importance they placed on various interpersonal skills using a Likert-type scale, most would likely respond with high ratings for all microskills and largely ignore the bottom half of the scale. The results of such a survey would not clarify whether all of the interpersonal skills were equally important to the respondents, or whether respondents simply did not differentiate among them based on how the questions were asked (Orme, 2003). As such, those results would not lead to actionable recommendations with regard to which interpersonal skills should be addressed in MBA curricula.

Given our desire to identify preferences of hiring managers among various combinations of interpersonal skills, we chose to use conjoint analysis as our primary analytical tool. Conjoint analysis is typically used in market research studies because it provides a set of techniques that model how people make complex judgments about products or services (Orme, 2006b). One aim of conjoint analysis is to inform marketers of products and services about the combination of attributes that consumers most prefer (Hair, Anderson, Tatham, & Black, 1992; Lockhart & Knain, 1998; North & DeVos, 2002). For example, when purchasing a laptop computer, a consumer must decide whether they are willing to pay more for certain attributes, such as a larger screen, longer battery life, and lighter weight, or if they are willing to trade any of these desirable attributes for a lower price.

We chose conjoint analysis because of the similarity between consumer choices made during purchase decisions and the judgments made by employers when evaluating potential employees (Moy & Lam, 2004). For purposes of this study, hiring managers were the consumers, MBA graduates were the products under consideration, and the interpersonal skill competencies of the graduates were the product attributes. Similar to marketing studies, we asked hiring managers to determine which combination of attributes was most desirable.

We conducted a field study in two phases. The purpose of the first phase was to identify the interpersonal skills (attributes) that hiring managers deemed most important. In the second phase, combinations of these attributes were presented as hypothetical candidates to a second set of hiring managers and their candidate choices were analyzed using conjoint analysis.

**Study: Phase One**

To identify the interpersonal skill attributes for our study we conducted structured one-on-one interviews with a nonprobability sample of seven managers who worked for employers in the region that hired a large number of MBA graduates. Each of the participants in this phase held a position of mid-level management or above. They also had at least five years of management experience and were currently or previously responsible for interviewing/hiring MBA graduates. They worked in engineering, organization development, finance, sales, marketing, project management, and quality departments in the aeronautics,
computer, high tech, telecommunications, and transportation industries. They had an average of nine
years of experience interviewing and hiring managers.

Each participant received a copy of the Interpersonal Microskills Framework (Table 1) and a
document that included detailed descriptions of each of the microskills. They then identified the six to ten
microskills they deemed to be most important to the interpersonal success of managers in their
organizations. Interpersonal success was defined as the ability of managers to build and maintain
successful interpersonal relationships with subordinates, peers, superiors, and/or clients that would
facilitate the achievement of the managers’ organizational goals whether they supervised other people or
were individual contributors.

A compilation of respondents’ selections revealed eleven microskills they believed were most critical
to managerial interpersonal success. The eleven microskills were then grouped into the following four
categories:

1. The first category was empathy, which respondents viewed as one of the single most essential
skills needed to build and maintain mutually beneficial interpersonal relationships.
2. The second category included assertiveness, collaborative bargaining, and political processes
skills, which are skills that facilitate managers’ abilities to effectively work with and influence
others, particularly their peers and superiors.
3. The third category was comprised of three skills that are especially useful for managers when
they communicate with subordinates: giving feedback, probing, and reflecting.
4. The fourth category included group diagnostic and intervention skills, as well as skills for
preparing and presenting information. These were classified as intellectually-oriented
interpersonal skills in that they require cognitive skills to diagnose and intervene with groups, as
well as the ability to cognitively prepare information that must be imparted effectively to groups
of employees.

These four interpersonal skill categories became the attributes that were used for the second phase of
our study.

Study: Phase 2

**FIGURE 1**

SAMPLE CHOICE-BASED SURVEY QUESTION

<table>
<thead>
<tr>
<th>Candidate 1</th>
<th>Candidate 2</th>
<th>Candidate 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above average influence skills</td>
<td>Above average influence skills</td>
<td>Adequate influence skills</td>
</tr>
<tr>
<td>Above average communication skills</td>
<td>Above average communication skills</td>
<td>Adequate communication skills</td>
</tr>
<tr>
<td>Adequate intellectual interpersonal skills</td>
<td>Above average intellectual interpersonal skills</td>
<td>Superior intellectual interpersonal skills</td>
</tr>
<tr>
<td>Above average empathy skills</td>
<td>Adequate empathy skills</td>
<td>Superior empathy skills</td>
</tr>
</tbody>
</table>

We designed an online choice-based conjoint survey that asked respondents to make judgments about
hypothetical management candidates with various combinations of skill levels in the four categories
identified in phase one. Participants were presented with 16 task screens that described the profiles of the
hypothetical candidates. They evaluated the various combinations of interpersonal skills and competency levels and then indicated their preference for the candidate they would most likely hire. To insure that respondents understood the microskills that comprised each of the categories, they were initially provided with comprehensive definitions and were able to access pop-up definition screens throughout the survey while making their candidate choices. Figure 1 provides a sample of the choice task screens from which participants were asked to make choices.

After completing the task screens, participants indicated how their answers might have differed if they were considering non-MBA versus MBA candidates.

**Phase Two Participant Profile**

A purposive, nonprobability sampling technique was used to identify members of the targeted population (Kerlinger, 1992; Trochim, 2006) for this phase of the study. Primary sources included a list of the top 200 area employers and members of a business college advisory board. Additional participants were identified via the snowball sampling technique (Trochim, 2006). Ultimately, respondents from 26 organizations in twelve different industries participated in the study, with the majority (70%) coming from telecommunications (31%), retail (25%), and high tech (14%).

Participants for the study were managers who (a) worked in the region, (b) had at least one year of management experience, (c) had responsibility for interviewing and/or hiring management candidates, and (d) worked in a department or unit that either targeted or considered MBA graduates for management positions. The departments in which they worked did not have to intentionally nor exclusively seek MBAs for management positions, nor were qualified respondents required to personally hold an MBA degree.

Valid responses were received from 207 participants (56% response rate); 65% were male. Many of the respondents were among the key decision-makers within their respective organizations. Two-thirds (66.67%) of the respondents were senior managers or directors, while 16.9% were mid-level managers, and 11.1% were executive managers or officers. Approximately one half (50.73%) of the respondents had advanced degrees.

As a whole, respondents were a well-seasoned group of managers who had spent a significant number of years in management positions; 85% of them had been managers for at least six years. Respondents represented a wide cross-section of departments and functions, with the largest percentage working in sales and marketing (27.3%). Accounting/finance (14.98%), operations (14.49%), and human resources (10.14%) were among the other departments that were well-represented. Almost half of the respondents (47.4%) had ten or more years of interviewing experience; of these, 67.6% had responsibility for hiring mid-level managers and 86% had experience hiring candidates with some type of graduate-level degree. This profile indicates that overall the respondents were an experienced, well-educated group of hiring managers, and thus qualified to evaluate the potential success of our hypothetical candidates.

**RESULTS**

We used choice-based conjoint analysis to calculate how important each attribute was to respondents when making their candidate choices (Orme, 2006b). Importance can also be interpreted as a weight assigned to each attribute, showing the extent to which hiring managers are willing to trade off one attribute for another (Moy & Lam, 2004). Average importances were estimated individually for each of the 207 respondents and then averaged across the entire group. The average importances of the four skill sets (attributes) are displayed in Table 2.

The results indicated that, with all else being equal, a candidate with superior competence in all four interpersonal skill attributes would be preferred over a candidate who possessed superior competency in only three of the attributes. Similarly, a candidate with superior competency in two of the attributes and above average competency in the other two would be preferred over a candidate with superior competency in only one attribute. A candidate with above average competency levels in four attributes would likely be preferred over a candidate with above average competency in three attributes, and so on.
While these conclusions about preference could be drawn intuitively, it is not reasonable to assume that there are more than a select few management candidates who possess superior levels of all four interpersonal skill sets. Therefore, while the average importances provided some insight into which attributes would have greater influence on hiring decisions, they alone did not provide sufficient...
information to answer our research question. We needed to know what respondents’ choices would have been if they were asked to choose from among candidates that possessed various combinations of the interpersonal attributes that MBA graduates were more likely to possess. To determine this, we created twelve hypothetical candidates with realistic combinations of attributes and skill levels (shown in Table 3). We then used another conjoint analysis technique – the purchase likelihood market simulation (Orme, 2006a) – with these hypothetical candidates to determine which ones were more likely to be selected by the respondents.

The market simulation estimated the hiring likelihood for the twelve candidates (see the last column in Table 4). Based on the choices made by our respondents, if hiring managers had the option of choosing from among all of these candidates, with all else being equal, the three candidates they would be most likely to hire would be candidate 11 (84.26 %), candidate 10 (82.21%), and candidate 12 (77.59%), as shown in Table 4. Each of these candidates had above average or superior communication, influence, and intellectually-oriented interpersonal skills. The candidate that was most likely to be hired had superior communication skills. However, this candidate also had above average influence and intellectually-oriented interpersonal skills. The results of this market simulation are consistent with the findings based on overall average importances.

**TABLE 4**

**CANDIDATES WITH THE HIGHEST HIRING LIKELIHOODS**

<table>
<thead>
<tr>
<th></th>
<th>Empathy</th>
<th>Influence</th>
<th>Communication</th>
<th>Intellect</th>
<th>Hiring Likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate 11</td>
<td>Adequate</td>
<td>Above Average</td>
<td>Superior</td>
<td>Above Average</td>
<td>84.26%</td>
</tr>
<tr>
<td>Candidate 10</td>
<td>Adequate</td>
<td>Superior</td>
<td>Above Average</td>
<td>Above Average</td>
<td>82.21%</td>
</tr>
<tr>
<td>Candidate 12</td>
<td>Adequate</td>
<td>Above Average</td>
<td>Above Average</td>
<td>Superior</td>
<td>77.59%</td>
</tr>
</tbody>
</table>

**A Comparison of Hiring Decision Trade-Offs**

A benefit of conjoint analysis methodology is that it can indirectly determine the complex value systems that individuals use when making decisions about products or services (or candidates) and thereby determine what trade-offs they are willing to make (Orme, 2006a). Several additional analyses were conducted to explore the significant trade-off patterns that were identified in the data. These include trade-offs by gender, age, hiring experience, management tenure, and department.

**Trade-Offs by Gender**

Female respondents gave an above average (18.23%) importance to empathy while males gave it a below average (15.60%) importance. This is not an unexpected result in light of long-held gender stereotypes (Duehr & Bono, 2006).

**Trade-Offs by Age, Experience, and Management Tenure**

A trend emerged while simultaneously examining survey results by respondent segments of age, interviewing experience, and management tenure. The weight of importance given to communication skills steadily increased as respondents’ years of management tenure increased. Respondents who were 50 and older also placed 37.88% importance on communication skills, which was higher than any other segment of respondents.
Trade-Offs by Department

Intellectually-oriented interpersonal skills, rather than communication skills, had the greatest impact on the hiring decisions made by respondents who worked in accounting and finance departments. The 33.08% importance they gave to this skill set was the highest of any group within any segment of respondents, meaning they were less likely than any group to trade intellectually-oriented interpersonal skills for the other skill sets. Conversely, respondents in accounting and finance placed lower importance on empathy (12.26%) than any other segment of respondents, meaning they were more likely to trade empathy for the other skill sets.

Respondents who worked in information technology (IT) departments also placed relatively high importance on the intellectually-oriented interpersonal skill sets (29.04%). Another distinguishing factor of respondents who worked in accounting, finance and IT was that they placed the most value on intellectually-oriented interpersonal skills, more than they did on any of the other three skill sets. They also placed greater importance on influence skills than they did on communication skills. This order of attribute importance (intellectually-oriented skills, influence skills, communication, and empathy) was different than the overall preference pattern of all respondents (communication, influence skills, intellectually-oriented skills, and empathy). This means that hiring managers in these departments were less willing than those in other departments to trade intellectually-oriented and influence skills for communication and empathy.

The differences in skill preference ordering from respondents working in accounting, finance, and IT are consistent with the classic definition of differentiation developed by Lawrence and Lorsch (1967). According to them, differentiation refers to the differences in cognitive and emotional orientations, and in formal structure, among different functional departments. These findings reflect commonly held stereotypes of accountants, finance employees, and IT workers as intelligent, detail-oriented individuals with relatively low affiliation and social needs. It is these very stereotypes, however, that expose the significance of these results. Entry into the accounting and technology professions, as well as early career advancement in these fields, may be determined more by an individual’s intellectually-oriented and influence skills. Once accountants, finance employees, and IT workers begin to attain increasingly higher management levels in the organization and are required to interact more frequently with others, they will need to improve their ability to show empathy and broaden their communication skill set. Therefore, managers in the accounting and IT fields should not be misled by the results of this study and erroneously conclude that they can continue to succeed without developing the full spectrum of interpersonal skills.

Other Significant Findings

In contrast to expectations developed in phase one of this study, empathy was assigned a low overall average importance. However, the trade-off analysis identified some variance among groups with regard to the relative importance of empathy. Empathy was assigned a higher overall importance by female respondents than by male respondents. However, respondents who worked in marketing departments also placed more importance on empathy than respondents from other functional areas. In fact, at 19.25% it was the highest importance placed on empathy by any segment of respondents within any of the groups that we analyzed (i.e., gender, age, hiring experience, management tenure, and department). This does not appear to be an anomaly; to be successful in sales or marketing individuals must listen deeply to determine the needs of their clients and must be able to understand clients’ perspectives. This provides affirmative evidence to managers that empathy is important for generating positive outcomes in interpersonal relationships.

A surprising result came in participants’ answers to the question about how their choices for candidates’ interpersonal competencies might have been different if they were considering management candidates who were not MBA graduates. We fully anticipated that the majority of respondents would think that non-MBA candidates had fewer interpersonal skills than the MBA graduates, or that the non-MBA candidates might have similar skill sets, but at lower competency levels than the MBA graduates. The fact that such a decisive majority of respondents (74.9%) said that they would require similar interpersonal skill sets in candidates with or without an MBA degree was unexpected.
As professors who focus primarily on developing MBA students’ leadership and interpersonal competence, we were predisposed to think that an MBA degree would provide a certain hiring edge to management candidates. We were disappointed to learn that this was not the case; however it did bring us full circle back to the business community’s criticism of business education. Practitioners believe business school graduates – undergraduate and graduate – are not fully prepared to meet the challenges faced by managers in contemporary organizations. The current curricular emphasis on hard skills at the expense of soft skills simply leaves the majority of business school graduates ill-equipped to successfully manage the people side of business (Abraham & Karns, 2009; Burgoyne & Reynolds, 2002; Hogan & Warrenfeltz, 2003).

DISCUSSION

The primary purpose of this study was to answer this question: Which combination of interpersonal skills is most desired in MBA graduates by hiring managers? The question was answered in the context of a conjoint analysis study that evaluated the various combinations of interpersonal skill sets held by hypothetical job candidates. The ideal graduate will have superior communication skills, above average influence skills, above average intellectually-oriented skills, and adequate empathy. A candidate with this combination of interpersonal skill competencies had the greatest likelihood (84.26%) of being hired. The candidate with the second highest likelihood of being hired differed by only 2 percentage points (82.21%) and the third most likely candidate to be hired followed closely with a 79% hiring likelihood.

Based on this study it is clear that communication skills have the greatest impact on a hiring manager’s decision, followed closely by intellectually-oriented interpersonal skills and influence skills. Because empathy has the least impact on hiring decisions, adequate levels of empathy would be sufficient.

More specific nuances come into play at a secondary level of analysis; for example, a candidate seeking a management position in the accounting, finance, or IT field would not only need superior communication skills, they would also need to possess a particularly high level of competency in the intellectually-oriented interpersonal skills and influence skills. Similarly, in addition to possessing strong communication skills, candidates would be more likely to be hired if they had stronger empathy skills when being interviewed by a woman or a member of the marketing department.

Implications for Business School Curricula

The classic definition of management describes a universal process of achieving organizational objectives with and through people (Pfeffer, 1996). Business schools embrace this definition by claiming to develop managers. However as Mintzberg (2005) has emphatically stated, business schools – in particular, MBA programs – really do not develop managers in the sense of this definition. Rather, they prepare students to be business analysts. Thus, graduates of business programs can evaluate competitive environments, develop strategic plans, analyze financial statements, and discount future cash flows to determine their net present value. While these skills are certainly important in business, they are not directly connected to achieving objectives with and through people. Business school graduates must also be capable of dealing with the human side of organizations.

Perhaps it is because these soft skills are more difficult to teach, but management education programs are notorious for failing to develop the interpersonal skills necessary to effectively manage people (Butler, Forbes & Johnson, 2008; Mintzberg, 2005; Schmidt & Ralph, 2005). In our study we asked hiring managers to identify the skills they believed are most important in a hiring decision. The resounding response was that interpersonal skills matter. The results of our study provide an empirically-based response that will assist in the effort to better align management education curricula with the needs of the business community.

First, the administrators and faculty of business schools must grasp the full import of the hard skill – soft skill gap and the failure of contemporary management education programs to close this gap. Business school curricula should include a purposeful focus on developing students’ abilities to give feedback, ask
probing questions, and reflect on what others have said – the microskills that comprise the communication skills category that is most important to hiring managers. Emphasis must also be placed on developing the other eight microskills that are critical to managerial interpersonal success: assertiveness, collaborative bargaining, political processes, diagnostic skills, intervention skills, preparing information, presenting information, and empathy.

The results of this study established that communication skill has an unmistakably large impact on hiring decisions; at 31.99% importance, it is almost twice as important as empathy (16.52%), and approximately 23% more important than influencing skills (25.22%) and intellectually-oriented interpersonal skills (26.77%). This in and of itself was not an unexpected result; the ability to effectively communicate is considered to be an integral component of interpersonal success (Hargie & Dickson, 2004; Pfeffer & Fong, 2002). The value that this finding has, however, is in the specificity of its definition. Communication skills historically have been defined very broadly and ambiguously (Earnshaw, 2004; Ferketich, 1998; Hunt & Sorenson, 2001; Yukl, Gordon, & Taber, 2002). This study has identified three very specific components of communication skill – giving feedback, asking probing questions, and reflecting on what others say – that can become the heart of communication skill development courses.

Because this study focused on interpersonal skills that are necessary for managerial success, business programs should consider infusing experiential approaches that allow students to learn and practice essential microskills in the same manner that therapists and teaching professionals have successfully employed the microtraining method (Ivey & Simek-Downing, 1980; Martin & Campbell, 1999). It is imperative that interpersonal skill development courses not end with the acquisition of individual interpersonal skills merely to create a repertoire for students. The final step of learning how to integrate the microskills into effective combinations and determining exactly how and when they should be used is essential. Just as accomplished Samurai warriors first learn and perfect a collection of individual swordsmanship skills and then integrate those skills into their being (Ivey, 1988), the interpersonally skilled manager will not only need a large repertoire of microskills; he or she will need to become proficient in combining the microskills to acquire an overall interpersonal competence that is greater than the sum of its parts.

We believe that business school curricula should include at least one required class at both the undergraduate and graduate levels that is devoted to the development of the critical interpersonal skills identified in this study. This course should be designed in such a way that the students will develop self-awareness by gaining an understanding of their leadership skills (strengths and weaknesses) via self-assessments and through feedback about the impact of their behavior on others.

A business school graduate should be prepared to do three things: manage oneself, lead others, and effectively run organizations (Drucker, 1999). For too long business schools have focused on the third outcome while all but neglecting the first two (Mintzberg, 2005). We believe that it is possible to teach students to manage themselves and lead others while they are running the business. In fact, we doubt the business can be effectively run if these elements are missing.

Strengths, Limitations and Implications for Future Research

The 207 participants in this study were a very seasoned and mature group of hiring managers who were well-educated. These credentials indicate that the respondents had extensive knowledge and the practical experience necessary to provide well-informed judgments of the hypothetical job candidate profiles. Thus, we assumed that they made selections based on their actual preferences for hiring.

On the other hand, the convenience sampling method used to recruit participants, as well as some characteristics of the respondent group itself, limit the generalizability of survey findings to the population of hiring managers. First, only 26 different organizations were represented out of a total number of at least 1000 local organizations. Additionally, while twelve different industries were represented, six of those included less than five respondents. Conversely, there were two industries that were populated with a large number of respondents from a small number of companies. For example, 79% of the respondents in the retail/sales group came from a single organization, and the remaining 21%
of those respondents came from one other organization. The 64 respondents from the telecommunications industry worked for a single organization. Finally, male respondents heavily outnumbered female respondents by two to one.

In an effort to create a less cumbersome response format we reduced the set of 28 microskills into four categories of skills. In future research the individual microskills should be used as individual attributes to create the conjoint survey rather than artificially constructing categories of skills. This is now possible due to recent upgrades in conjoint analysis software. The ability to use the choice-based conjoint survey method (Orme, 2006b) and the hierarchical Bayes analysis technique to estimate overall choice preferences from a relatively few number of choice tasks (Orme 2006a) allows researchers to use a much larger number of attributes without unreasonably burdening participants.

Future research should add salary requirements and job-specific required skills as part of the attribute combinations being evaluated. Candidates with superior interpersonal skills in all areas may not be as desirable if they also have salary requirements that are well above what the hiring organization is willing or able to pay. Similarly, business knowledge and management experience are also part of the complete candidate package and should be included as attributes in future surveys regarding interpersonal competencies. In light of the findings that revealed decidedly different levels of importance placed on the interpersonal skill sets by accounting, finance, and IT department respondents, members of professional organizations or industry-specific groups could be surveyed to identify the most desirable combinations of interpersonal skill competencies for management candidates in specific fields or professions.

The respondent pool in the current study was heavily weighted toward men; therefore future studies should attempt to achieve a more balanced sample. This could be achieved by using purposive sampling techniques directed at professional women’s organizations and industries that have a larger than average percentage of female managers (health care, for example). This would allow further exploration of the gender-specific differences in hiring manager preferences identified in this study.

A longitudinal study should be conducted to determine if the hiring preferences of younger managers will change as they become older and more experienced to mirror the preferences of the current older, more experienced managers, or if their preferences are a reflection of a different generation of managers.

Additionally, because participants in this study worked in the southwestern United States, studies should be conducted in other parts of the country to determine if hiring manager preferences differ by geographic area.

CONCLUSION

This study offers two new perspectives from which to think about management education. One is to consider the value of identifying a core set of interpersonal microskills that, when combined appropriately, can lead to interpersonal competence. This will reduce the ambiguity around what comprises managerial interpersonal skills. The other perspective comes from giving a voice to local hiring managers in determining which skills are the most critical for managerial interpersonal success in their organizations.

Practitioners attach higher importance to different competencies than do academic faculty, therefore it would seem prudent for schools of business to engage in frequent conversations with practitioners to ensure that business education programs are designed to produce in students both the knowledge required for academic rigor and the practical management skills valued by business organizations (Abraham & Karns, 2009; Levenburg, 1996).

It is imperative that business school administrators put forth greater effort to change their curricula and thereby change the negative perception in the business community. Armed with knowledge about the importance that hiring managers place on the various interpersonal skills, and an evidence-based recommendation, business school administrators can address the development of those specific skills when designing curriculum. The result will continue to narrow the gap between the managerial skills that are necessary for success in today’s organizations – the skills that hiring managers actually value – and
the skills that students develop in business school, thus better preparing them to succeed as managers. We see this as a key component of the necessary “revolution in management education” (Pellet, 2005).

REFERENCES


This article provides basic principles of business etiquette and professional presence that employers should communicate to accounting interns when they start work at the firm. The authors’ suggestions for employers are based on recent trends in business etiquette and the experience of one of the authors in coordinating an internship program over a 25-year time period. The article is divided into the following topical areas: general guidelines, professional dress, social behavior, communication, and work habits. Most of the discussion pertains to public accounting firms, but these principles of etiquette and professional presence apply similarly to industry firms and government agencies.

INTRODUCTION

Accounting internships have existed for decades, and their potential has long been recognized (Miller, 1945). As early as 1914, New York University had a program offering accounting experience to college students. By 1952, over 30 schools had some form of accounting internship program (Committee on Internship Programs, 1952, p. 316). Internship programs today are a prominent feature of accounting curricula, and the number of accounting students completing internships before graduation is on the rise (Nelson, et al., 2008).

For the employer, the blending of classroom and work experience has advantages over the more traditional situation in which experience follows formal education in accounting. Accounting interns can be a source of temporary help to relieve staff members during peak work periods and to fill in for vacationing employees. Internships may be utilized as an extended interview period, which can lead to the filling of permanent positions. Interns can bring new energy and a fresh outlook to an office, along with knowledge of the latest developments in technology from the university environment. Since interns become familiar with the firm, they themselves can act as recruiters of other interns and full-time employees for the firm.

Despite widespread agreement in the literature on the value of accounting internships to firms (Lang, 1979; Ricchiute, 1980; Defilippis, 1982; Chandra & Paperman, 1983; Siegel & Rigsby, 1988; Beard, 1988; Mauldin, et al., 2006; Davidson, 2010), little has been written about the challenges firms face in
helping these embryo accountants adjust to a professional office environment. The accounting workplace has its own set of unspoken rules and invisible rites of passage (Prafder, 2011), and most accounting students are inadequately prepared for the first day on the job. The blending of classroom and work experience results in students being placed in work situations earlier in their careers—often before understanding the norms of professional behavior. Moreover, it takes up to four to six weeks for an intern to acclimate to a firm’s culture and policies (Moran, 2007, p. 47). Employers should realize that to college students, an internship is somewhat like being a freshman in college again (Hurlock, 2011).

This article provides basic principles of business etiquette and professional presence that employers should communicate to accounting interns who are beginning work at the firm. Some of these principles may be included in official company policies, but others may not be addressed in writing. Before examining specific principles of behavior, it is useful to understand how instruction in business etiquette and professional presence fits within the context of employers’ overall internship responsibilities.

According to a 1955 committee of the American Institute of Accountants and the American Accounting Association, employers’ responsibilities fall into seven categories: (1) to inform the school and the student about salary, expenses, etc., (2) to pay a fair salary, (3) to see that the student gets a clear understanding of work rules and standards of professional conduct, (4) to provide the student with varied assignments, (5) to give the student adequate supervision, (6) to evaluate the student’s work and to discuss results with him/her, and (7) to furnish a report to the school (Committee on Accounting Personnel and Committee on Faculty Residency and Internship Programs, 1955, pp. 208-209). These responsibilities still ring true in contemporary internship programs. Clearly, Item 3 above speaks directly to business etiquette education for interns; in addition, Items 4 and 5 have a bearing on expected norms of behavior in the firm as well.

Accordingly, coverage of the above aspects of an employer’s role in internships is included in our commentary herein. The suggestions we present for employers are based on recent trends in business etiquette and the experience of one of the authors in coordinating an internship program over a 25-year time period. The article is divided into the following topical areas: general guidelines, professional dress, social behavior, communication, and work habits. Most of the discussion pertains to public accounting firms, since most of the authors’ experience is with these entities; we believe, however, that these principles apply similarly to industry firms and governmental agencies.

GENERAL GUIDELINES

In today’s public accounting firms, interns are viewed more as full-time employees than as part-time student workers. These fledgling accountants are expected to be productive, to follow company policies, and to abide by rules of conduct. Employers should emphasize that serving in an internship is not like showing up for class. The internship, in reality, is a laboratory extension of the classroom.

An intern’s first job is to learn the corporate culture and try to adapt. Firms should facilitate this process by providing an orientation program to cover basic principles of the firm’s corporate culture and etiquette. Employers should first present the mission and background of the organization so that the new intern can understand the context of the current working environment. Other basic information to be provided includes the client list, organization chart, layout of the facilities, company policies, and emergency procedures. In short, the orientation program should advise interns on what to expect and make them feel like they belong in the firm. Students are accustomed to receiving PowerPoint note sheets in class, so a slide presentation with handouts will be a familiar tool in helping them to remember the most important company policies. Everyone—from partner to senior (or immediate supervisor, if different)—should be involved in the internship orientation. While the tone is set from the top, the role of seniors is critical. As seniors are reminded of their role as the ones who set an example, they will see the importance of their influence in the process.

Supervisors should be chosen who can relate well to college students and treat them with respect. Firms should consider assigning a mentor to each intern—one other than the intern’s immediate supervisor and outside of the intern’s work group—who is experienced, patient, understanding, and
willing and able to take on a protégé. Interns may not ask their supervisor certain questions for fear that it will negatively influence their evaluation (Viator & Dalton, 2011). Assigning a mentor assures students that they have an ally in the company. One public accounting firm assigns each intern a “buddy” to help with any problems and to meet with the intern at least twice outside of the office setting (Sessions, 2007, p. 13). Larger firms may assign a dedicated internship coordinator as mentor to oversee the program, consult with interns, and be the problem-solver for staff (McGee, 1996, p. 21). Firms should guard against the mentor’s viewing his/her role as simply checking off one more item on a “to-do” list. True mentoring requires time and effort (Viator & Dalton, 2011).

**DRESS CODE**

Appropriate dress and hygiene are important elements of corporate culture. Sometimes the dress code is communicated in the employment interview, but the importance of appropriate business attire is reinforced when the dress code is reviewed during the orientation program.

Interns need to know whether they are being held to the same standard as other employees. Unless interns are taught the dress code, they may not follow company guidelines; some may even follow the rules of their most recent place of employment. The firm should cover all facets of the code, including the policy on slacks versus blue jeans; ties and long-sleeved shirts versus polo shirts; and the types of shoes.

If the organization’s dress code for interns is “business casual,” expectations should be well defined so that interns know exactly what is expected in a particular office. Regardless of the written policy, students should be taught the basics of appropriate dress such as tucked-in shirts and blouses and clothing clean and pressed. Athletic shoes present a question; most firms do not consider this type of footwear as business casual, but the firm may want to consider whether the intern’s work requires extensive walking.

For interns working at the client’s place of business, many firms follow the dress code of the client. Likewise, if the client has a business-casual policy, interns should dress according to the client’s definition of business casual. On the other hand, if a client has a more formal dress code (as in a bank), more formal attire (e.g., suits) should be worn.

If interns are to meet with clients, it is appropriate to discuss grooming, since the image of the firm is at stake. Students must know that men should be shaven and that both women and men should wear conservative hairstyles. Visible tattoos, body piercings, and unnatural hair coloring are usually forbidden in public accounting firms.

**SOCIAL BEHAVIOR**

Employers should be cognizant of a generational divide between interns and other employees. Interns may have a concept of work/life balance different from that of experienced supervisors. On the other hand, interns may be more technologically savvy than older supervisors (Fogarty, 2009, pp. 12-13).

Small behaviors can make a big difference in the student’s contribution to the work team. When meeting with clients, an intern’s genuine smile, palm-to-palm handshake, eye contact, and correct posture communicate confidence and sincerity. Interns should practice these behaviors continuously until they become “second nature.” As they introduce themselves to everyone in the company, these students should be not only pleasant and cooperative, but also professional in their demeanor. Since these behaviors do not come naturally to all interns (and to many individuals who are in the early stages of their career), a mentor who is accomplished in business etiquette and professional presence can provide invaluable help to an intern.

Firms should communicate whether any topics of conversation are taboo, such as politics, religion, and interpersonal relationships. In addition, it should be clear that off-color jokes, sexually suggestive comments, and foul language are improper in a professional office environment. Firms also should set some ground rules on what types of questions are appropriate and inappropriate. Any office policies on dating other employees must be clearly communicated.
Accounting interns need to know whether to address their supervisors with titles like “Mr.” and “Ms.,” or by first name. Interns must understand the supervisor’s management style in order to minimize miscommunication. If an intern has a concern about an office issue such as the work schedule or the volume of work assigned, supervisors generally prefer to address this type of question privately. This issue may not be appropriate for the orientation, but it should be covered early in the internship period.

**COMMUNICATION SKILLS**

In a 2011 study of marketing internship providers (Swanson & Tomkovick, 2011, p. 167), respondents indicated that communication is the most important skill that an intern should possess. Communication affects all aspects of the workplace. Guidelines on the proper way for interns to communicate can lead to a more efficient and effective work environment. The authors suggest the following communication topics for coverage, either in the orientation program or in meetings with the immediate supervisor:

- **Preferred forms of communication for particular situations.** Indicate the supervisor’s desired form of communication in response to various situations: memoranda, email, telephone calls, or face-to-face conversation.

- **Technical questions about the duties of new interns.** New interns will have many technical questions about their duties. Provide guidance on how and when to ask questions about an assignment. The intern should be informed about the types of questions that should be addressed to his/her supervisor, and the types of questions should be asked of the mentor. The supervisor should indicate how he/she prefers to address the intern’s questions. Specifically, does the supervisor prefer that the intern ask questions as they arise, or should the intern make fewer trips to the supervisor’s office and accumulate questions to a “critical mass” before seeking advice?

- **Listening as a vital communication skill.** A good listener is giving the gift of self to another person, a gift that does not go unnoticed (Kennedy, 1997, p. 29). The supervisor should remind interns to listen closely to instructions, taking notes in order to minimize unnecessary questions later. Interns should develop the habit of having a writing instrument on their person at all times, as well as ready access to a notepad.

- **Policies for the use of electronic mail.** Email policies should be covered in the orientation session. Guidelines may include the following policies:
  - Email messages should be answered promptly and should be brief and straightforward, with a concise, descriptive subject line.
  - Correct grammar, punctuation, spelling, and tone should be used for professional presentation.
  - Texting shortcuts (like “thanx”), emoticons (like smiley faces), and shouting (using all uppercase letters) are unsuitable for office email messages.
  - Interns should use the signature feature with their contact information when sending an email message.
  - The supervisor should communicate company policy regarding the sending and reading of private emails during working hours.
• **Policies for the use of the telephone.** The telephone is still the most powerful tool in any business office. If interns are expected to accept calls from clients, they should be trained in proper telephone etiquette. For example, interns should answer the phone preferably within the first two rings and should speak in a clear, professional tone, identifying the company and giving their own name. They should listen patiently and attentively to the caller and avoid interrupting the individual who is speaking. In leaving voicemail messages, interns should speak slowly and distinctively, and spell their name if it has an unusual spelling or difficult pronunciation. They should leave a phone number at the beginning and end of the message. Interns should be reminded to say “goodbye” as they would in a live phone call.

**WORK HABITS**

Firms should provide interns with guidance on the expectations for work assignments. Supervisors do not want to encounter “... [interns] disappearing for hours to complete the simplest of tasks and questioning time-honored routines and procedures” (Hood, 2004, p. 13). Presented below are suggestions for supervisors who delineate their firm’s expectations regarding the work habits of interns:

• At the beginning of employment, clarify expectations regarding working hours; during peak periods, interns may need to work overtime. Keep interns informed in advance of any changes in the work schedule, since they must coordinate work with their class schedule. Interns may need time off before exams, but they should provide advance notice. Summer interns should understand that no time off will be given for vacations.

• Employers should describe the availability of office amenities; for example, whether interns will have their own office or cubical and whether they may have to share a desk or computer with another intern. The policy on use of company office supplies or other company assets should be included in the orientation session.

• Interns may require closer supervision than other employees. Supervisors should require regular progress reports as an assignment continues. In addition, firms should ensure that students know where to draw the line between being friendly and engaging in excess socializing that can reduce productivity.

• Some interns may prove to be remarkably efficient and have time for extra work. Take advantage of these superstars! Intelligent, career-minded interns like to see a task through to the end and see the fruits of their labor on projects such as a completed audit, tax return, or financial statement. Give interns more responsibility and let them demonstrate what they can do; interns should not be glorified coffee runners. A mix of short-term and long-term assignments is a good way to ensure that interns will always be busy (Hood, 2004, p. 33).

• The orientation should include the company’s policy on personal cell phone use and personal use of company cell phones (if provided). Be specific about when interns can use their cell phone for personal calls and texting, and indicate whether their personal phone should be turned off during working hours. If the cell phone policy for interns is different from that of other employees, make sure that the interns know the rationale for this decision.
• Interns should know the policy on using the Internet for personal purposes. If they are caught up on their assignments, you may want to provide industry literature or training to occupy their time, rather than letting them surf cyberspace.

• Let interns know up front if they might be assigned work not covered in the employment interview. Interns will be more adaptable and receptive to change if they know what to expect beforehand.

• Tell interns that mistakes can and will happen. Encourage them to point out mistakes as they occur. Provide feedback immediately and in a positive way. The only way interns can learn from their mistakes is to get constructive criticism in a timely manner (McCarrier, 1986, p. 10).

• Include interns in meetings or workshops. They can sometimes provide fresh viewpoints. You may want to establish some ground rules, however, about when it is appropriate for them to speak. Interns should always take notes during meetings for later reference.

SUMMARY AND CONCLUSIONS

Accounting interns need to know the basic principles of business etiquette, as well as company-specific policies on dress, behavior, communication style, and work expectations. These aspects of employment are essential for a successful internship experience. Company policies can be communicated during the orientation program and/or in the initial meeting with the supervisor. In addition, the firm’s management should lead by example; interns also learn a firm’s corporate culture by observing the day-to-day activities of its employees.

Planning interns’ work assignments forces supervisors to review their own duties and organize their own work. This necessity can lead to improvements in existing procedures and processes, resulting in indirect benefits to the firm. A well-designed internship program can also be an integral part of a firm’s long-term recruiting plan.

If a problem arises with an intern, the concern should be handled in a professional manner. If a meeting with the intern does not solve the problem, the supervisor should contact the university internship coordinator or department head. The university internship coordinator can serve as a mediator if issues occur. The early release of an intern should be the last option—only after all else fails.

When the internship has been completed, an exit interview should be standard practice to let interns know how they performed. Employers should also issue a performance report to the university accounting internship coordinator. The university may already require documentation of the type of work completed and the total hours recorded.

Teaching these simple principles of business etiquette and professional presence can help the intern adapt to the corporate culture, prepare for a career after graduation, and make a valuable contribution to the firm. Firms wishing to establish an accounting internship program should join forces with the accounting department or career services office in their local university to initiate the process.

REFERENCES


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A Longitudinal Review of Labor Relations Coursework in U.S. Business Schools: 1977-2002-2010

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This study investigates the status of the labor relations course in the undergraduate business school curriculum, comparing the results of our 1977 study with two replications (2002, 2010) of the same survey. The initial survey revealed the course occupied secondary status in the curriculum but cited arguments as to why its importance should be elevated. The 2002 replication showed a continuing decline in the status of the course but showed that related courses in mediation and negotiations were being added. By 2010 labor courses had declined even more but many more business schools were offering related conflict resolution courses, thus allowing students the opportunity to develop critical skills in labor relations and conflict resolution.

BACKGROUND

Traditionally a labor relations course has appeared somewhere in the business school curriculum at the undergraduate level. The logic for such a course has been that practicing managers, and therefore business students, need a general awareness of labor relations concepts to enable them to reduce workplace conflict, to maintain management’s rights, to avoid violations of labor law, and to discourage managerial activities which increase the employees’ propensity to unionize and/or grieve or strike.

Over thirty years ago one of the present authors investigated the status of the labor relations course in terms of its place in the business school curriculum and in terms of course content (Stephens, 1977). That study demonstrated the labor relations course occupied a position of secondary importance in the curriculum. Arguments were presented that all managers need to understand labor law and labor relations constructs to avoid both blatantly illegal acts and managerial activities that increase the likelihood that employees will unionize and/or grieve or strike. Likewise, the grievance processing and negotiations concepts and skills taught in a labor relations course were useful and crucial for all managers. The study demonstrated that business
administration students not majoring in labor and human resources management received little or no training in grievance processing or negotiations, and were handicapped in their managerial roles. That research provides the baseline for this current research.

A follow-up project was undertaken twenty-five years later (Stephens, Stephens, Kohl, 2004), replicating the early study and identifying important trends and events during the intervening years leading to the authors’ conclusion that grievance processing and negotiations skills were even more important for business school graduates, though the labor relations course had continued to decline in frequency and status.

In light of recent significant changes in the political and economic environments the labor union movement is receiving increased attention and organized labor’s power and influence in the workplace may consequently change. On the political front the election of a pro labor Democratic President, Barack Obama in 2008, and proposed changes in federal labor law, specifically the Employee Free Choice Act (2007) and Police and Firefighter Monopoly Bargaining Bill (2009), introduced in a congress where the historically more labor friendly Democratic Party enjoyed majorities in both the U. S. Senate and House of Representatives, may lead to a strengthening of union power and influence. In the economic arena, the U. S. economy endured the deepest economic recession since the Great Depression, resulting in significant job loss and accelerating a decline in union membership. This dislocation may lead to a loss in labor union power and influence.

With this turbulence in the political and economic environments and possible subsequent changes in the strength and importance of organized labor, the timing seemed right to replicate our early studies and examine the frequency and status of the labor relations course in the business school curriculum in the present and assess the likelihood that the next generation of professional managers will have the skills and training to effectively manage the union/management relationship.

HISTORICAL STATUS OF THE LABOR RELATIONS COURSE

In 1977, fifty universities, one per state, were selected from the National Microfilm Library’s College Catalog Collection, (1976-77). For each state the survey included the university which was believed to be the “flagship” institution for that state, based on an assessment of overall university reputation. As can be seen in Table 1, though students at 92% of the schools surveyed could take a labor relations course by exercising their options to do so, it is obvious that most schools did not view the course as having general utility for all business majors. The course was never required of all business majors, or even of all management majors. As conditions four and five from Table 1 indicate, the course was largely optional in the business curriculum and thereby not perceived as highly important at the undergraduate level.
### TABLE 1
STATUS OF THE LABOR RELATIONS COURSE IN BUSINESS SCHOOL CURRICULA AT THE UNDERGRADUATE LEVEL, 1977

<table>
<thead>
<tr>
<th>Status in the Curriculum</th>
<th># of Business Schools (N=50)</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LR course required of all business majors</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2. LR course required of all management majors</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3. LR course required as part of an LR or HRM concentration</td>
<td>14</td>
<td>28%</td>
</tr>
<tr>
<td>4. LR course is in a required category for management majors with an HR course where one or the other must be taken</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>5. LR course is included in a list of specialized courses for management majors with courses such as wage and salary administration, selection, performance evaluation, or leadership skills; students are required to choose one to as many as three from the list</td>
<td>21</td>
<td>42%</td>
</tr>
<tr>
<td>6. LR course is a free elective</td>
<td>18</td>
<td>36%</td>
</tr>
<tr>
<td>7. LR course is not offered</td>
<td>4</td>
<td>8%</td>
</tr>
</tbody>
</table>

### THE HISTORICAL CASE FOR REQUIRING THE LABOR RELATIONS COURSE

Any course will likely be required for the management degree or the bachelor’s in business if the course content provides concepts or skills which are deemed essential for effective administration. The typical labor relations course treats a broad and diverse set of topics, including labor law, union operations, contract negotiations, content, and administration that are important and useful to aspiring labor relations specialists or human resources managers. For general managers however, certain sections of the course seem to be of greater importance than others.

#### Grievance Processes

Line management has traditionally been formally involved in the processing of grievances, and most union contracts require that line managers process grievances through the first and second steps. Non-
unionized firms may or may not have a formal grievance process. Where a grievance procedure does exist, line management usually plays the major role and retains the power to render the final adjudication of grievances (Feuille and Chachere, 1995; Lewin, 2001; Harris, Doughty, Kirk, 2002). Even where there is no formally articulated grievance mechanism, informal grievances arise frequently and must be dealt with by the immediate line supervisor. Thus it seems important that every line manager receive training in the techniques of grievance processing.

Unfortunately, business schools designed their curricula in such a way that only those pursuing degrees formally designated as labor relations or human resources management were required to take the labor relations course and receive training in the grievance process. As the data in Table 1 indicate, only 28% of those schools surveyed offered such majors. In every curriculum surveyed, all other management majors and all other business majors could choose to avoid the labor relations course. Students who opted not to take a labor relations course were likely handicapped in their supervisory role because of a lack of familiarity with the grievance process and a lack of the skills necessary to resolve grievances effectively.

**Negotiations Skills**

Involvement in labor negotiations has traditionally been limited to the human resources or labor relations director, legal staff, top line officers, or consultants, though at least one line manager with direct supervisory responsibilities over bargaining unit employees is sometimes included (Carrell and Heavrin, 2004; Holley, Jennings, Wolters, 2009). For this reason the general usefulness of training in the negotiations process is not as obvious as was the case for the grievance process. This apparent lack of general utility for negotiation skills is however a result of viewing negotiating skills as useful to managers only in collective bargaining. A broader view reveals numerous applications for general management in a variety of contexts (Hayford, 2000, Lewicki, Saunders, Barry, 2007).

Nierenberg (1973) argues that the techniques of negotiation strategy and tactics are generally relevant and are used frequently in purchasing and sales as the manager attempts to secure favorable pricing arrangements with both vendors and customers. Real estate transactions almost always present a need for negotiating skills. Likewise, in transactions such as mergers and acquisitions, negotiating skills are essential.

Negotiating skills are also useful to managers in resolving grievances, particularly where there is no contract and where the grievance process is administered solely by management. Management’s authority usually puts the manager in a position where negotiating a mutually satisfactory resolution of grievances is not required. The techniques of negotiation however can lead to greater employee acceptance of decisions where employee grievances or complaints are the issue.

General managers are quite likely to experience situations in which negotiating skills would greatly improve organizational effectiveness. Mistakes in negotiations can reduce managerial and employee productivity and result in significant organizational costs and loss of organizational reputation.

The preceding analysis has developed the case for the advisability of training in the grievance process and negotiations skills for human resources and labor relations specialists as well as general managers. It is thereby logical that all students preparing for administrative careers receive training in these processes somewhere in the business school curriculum.

In the 1977 survey, training in those areas was not available except in the labor relations course. Some rudimentary negotiating skills were presented at certain points in the marketing curriculum in the context of product pricing decisions or in the finance curriculum as part of a discussion of mergers and acquisitions. These discussions tended to be brief and descriptive and generally did not present negotiations models or practice via the case method. There was also a lack of training in the grievance process outside the labor relations course. Some human resources management courses contained a module on employee grievances but these tended to place more emphasis on preventing conflict rather than adjudicating grievances once they occurred. Some casual discussion was occasionally included in micro-behavior courses but these generally dealt only with informal employee dissatisfaction rather than formal grievances.
In the initial research, contents of the labor relations course were divided under two general headings: 1) *Description*, and 2) *Process*. The topics of labor history, labor law, union structure and operations, and contract content fall under the first heading. They involve the presentation of relevant facts which heighten student understanding of workers and their attitudes and the interface between management and union officers and organizers. Familiarity with labor law prepares students to respect the sanctity of the labor contract and to avoid the commission of unfair labor practices. Thus these *description* elements prepare students to manage more effectively where unions are present and deal prudently with union organization campaigns. The *process* elements, conceptual material and casework on negotiations and grievance handling, lead to the development of specific skills designed to improve students’ abilities as negotiators and to enhance their expertise in handling grievances. They likewise prepare students to manage more effectively where unions are present or are seeking recognition. These skills are also useful in a variety of business contexts beyond labor relations and human resources management.

The 1977 study concluded that most business students could graduate without receiving instruction or training in the important process elements of the labor relations course, grievance-handling and negotiations. This leads to inadequately prepared managers who may make critical and costly errors in negotiations of all types, outside or within the context of collective bargaining. Those not trained in processing employee grievances, regardless of the presence or absence of a union contract or a formal grievance system in a non-union setting, are likely to contribute to organizational unrest and inefficiency. The study thereby recommended the labor relations course be required for all business majors and particularly for all management majors. The initial study likewise concluded that most business students could graduate without receiving significant instruction or training in the *description* elements of the LR course. These constructs are arguably essential for labor relations and human resources graduates but perhaps less important for general managers. One notable exception would be lack of familiarity with labor law, where naïve general managers are likely candidates to commit unfair labor practices during union organizing campaigns. Though a business law course was universally required at that time, a review of course descriptions and popular textbooks revealed that labor law received only scant coverage when it was included, and was often omitted entirely from the required business law course.

**TRENDS IMPACTING THE RELEVANCE OF THE LABOR COURSE, 1977-2002-2010**

Between 1977 and the subsequent studies, five major trends have emerged which affect the importance of a labor relations course: 1) Shifts in the pattern of union membership; 2) The passage of several major statutes regulating employment conditions; 3) The rising frequency of formal grievance systems in employment, independent of unionization; 4) The increasing rate of employee grievances and employment related litigation; 5) Increasing utilization of negotiations and arbitration across a broad range of business issues, including the emergence of alternative dispute resolution (ADR). Each of these trends has an impact on the need for the contents of a traditional labor relations course in the business school curriculum, particularly the process elements of negotiations and grievance administration.

**Shifts in the Pattern of Union Membership**

In 1977 about 24% of the workforce was unionized, compared with slightly more than 13% in 2002. This percentage has declined only slightly since then, down to 11.9% in 2010. This constitutes a contraction of about 50% between 1977 and 2010. The economy requires fewer labor relations graduates with training in the descriptive elements from the typical labor relations course now than was the case three- plus decades ago. Nonetheless, in 2010, over sixteen million workers were employed where a union contract was in place (Union Members Summary, BLS, 2011). Since about twelve of each one hundred workers are represented by unions, the probability that the workers business graduates supervise in their careers will be represented by unions is non-trivial. The need for professional managers in the contemporary economy with training in the descriptive elements of the labor relations course, labor institutions and labor law, as well as the process elements, negotiations and grievance administration, continues to be sizable.
While private sector union membership has experienced a long-term decline, the rate of unionization in the public sector increased rapidly in the 1960’s and 1970’s but has been relatively stable since 1983. In 2002, the public sector unionization rate was 37.5 % compared with 8.5% in the private sector. By 2010 the public sector rate had decreased marginally to 36.2% compared with a decline of almost two percent to 6.9% in the private sector. A few less than four in ten government workers were union members, mainly teachers, police officers, and firefighters. This compares with fewer than one in ten private sector workers unionized (Union Members Summary, BLS, 2011). The growth of public sector unions over the past two decades has been a significant offset to declining union membership in the private sector. This public sector expansion in unionization and collective bargaining has significantly offset declining private sector demand for graduates with knowledge of labor institutions and labor law and with negotiations and grievance processing skills.

New Employment Regulation Legislation

Between 1960 and 1990 Congress passed at least two dozen major statutes regulating employment conditions. Among these are the Civil Rights Act of 1964, the Occupational Safety and Health Act in 1970, the Employee Retirement Income Security Act in 1974, the Americans with Disabilities Act in 1990, the Civil Rights Act of 1991, and the Family and Medical Leave Act of 1993. These acts and others fundamentally changed the employer-employee relationship and triggered employee grievances, leading to conflict and litigation over topics including sexual harassment, disabilities, age discrimination, and wrongful termination. More and more aspects of the employment relationship were brought under the influence of regulatory agencies and the courts. (Lipsky and Seeber, 2001). The recognition of such employment problems coupled with legal protections extended to workers has led to considerable workplace conflict, elevating the need not just for legal knowledge, but for basic grievance processing and negotiations skills for managers who seek to solve these types of issues both before and after they are referred to the regulatory agencies or the courts. Consequently, the contents of the traditional labor relations course have become more important for professional managers.

The Rising Frequency of Formal Grievance Systems in Non-Unionized Employment

Formal grievance procedures have been much less frequent in the non-union sector than in the unionized workplace (Ichoniowski and Lewin, 1988). During the 1980’s and 1990’s however, many non-union firms opted to formalize grievance processes in their management-controlled human resources systems. Berenbeim (1980), in a survey of 750 non-union firms found that 48% had some type of formal grievance procedures. Similar studies by Delaney, Lewis, and Ichniowski (1989) and Edelman (1990) found formal grievance procedures in place in 50% and 65% respectively of the non-unionized companies surveyed. A more comprehensive study by Feuille and Chachere (1995) documented the existence of formal grievance procedures in 57% of the non-unionized firms who responded to their survey. Feuille and Chachere therefore concluded that at least 50% of large, private, non-unionized firms in the U. S. have instituted formal grievance processes. Subsequent research corroborates these findings, that more than half of non-unionized firms have instituted formal dispute resolution processes. (Covin, 2003; Lewin, 2004; Colvin, 2006). The chances of a business school graduate being employed in a context where grievance administration skills are needed is significant and rising. The content of the traditional labor relations course thereby becomes more important to a broader group of business school graduates.

The Increasing Rate of Employee Grievances and Employment Related Litigation

The workplace has become increasingly contentious in recent years, resulting in elevated numbers of employee grievances and employment related lawsuits. This is due in part to the rising acceptance and formalization of the concept of “due process” in the employment relationship. Corporate due process can be described as “effective mechanisms and procedures for insuring equity and justice among employees” (Ewing, 1989). In practice, this means that no employee should be deprived of his or her job and well being in the company without a fair hearing. Rising rates of grievances and employment related lawsuits are also a function of increasing federal and state legislation regulating employment.
Employment discrimination lawsuits filed in federal courts in 1989 were over twenty times the number filed in 1970 (Donohue and Siegelman, 1991). Likewise, during the 1970’s and 1980’s so many fired non-union employees filed wrongful discharge suits that processing wrongful discharge suits was characterized as a “growth industry” (Dertouzous, Holland and Ebener, 1988). The number of employment related lawsuits filed by employees continued to rise dramatically after the passage of the Civil Rights Act of 1991, so much so that employment law has been described as the “personal injury law of the 1990’s” because of the frequency of litigation and the magnitude of the awards (Colsky, 2003). Most recently, 2010 has been described as a “seismic one” for employment-related class action litigation, with the value of such class action employment settlements increasing fourfold over the previous year. (Seyfarth & Shaw, 2011). This increased frequency of formal complaints in the employment relationship not only creates a need for more labor and HR professionals, but elevates the importance of grievance administration and negotiations skills for general managers. These skills are necessary in helping firms reduce the degree of employee discontent and in resolving problems before they are submitted to formal grievance systems, governmental regulatory agencies, or the courts. Once these disputes have been formalized, the same skills are necessary for managers in responding to employee complaints through these venues. Negotiations and grievance administration skills have clearly become more important and useful to business school graduates in light of these developments.

The Rise of Negotiation and Arbitration and Alternative Dispute Resolution (ADR)

There has been rapid growth in the use of arbitration and mediation as alternatives to litigation in resolving disputes between businesses and their employees, partners, customers, and suppliers. This system has come to be known as alternative dispute resolution, or ADR. ADR is commonly defined as “the use of any form of mediation or arbitration as a substitute for the public judicial or administrative process available to resolve a dispute” (Lipsky and Seeber, 1988). The increasing use of ADR as a dispute resolution mechanism is perhaps best demonstrated by the rising caseload reported by the American Arbitration Association (AAA). From 1995 through 2001 the AAA set a new caseload record each year, and for 2000-2001, the number of AAA arbitration cases grew by 10%. Insurance disputes have been the largest component in the AAA caseload. Commercial, employment, labor, and accident cases also contributed significantly. In 2001 the number of employment arbitrations increased by 5.5%. Commercial mediations also rose significantly (Dispute Resolution Times, April-June, 2002). Stone (2003) concluded that “the use of arbitration has grown exponentially” in recent years. From 2005 through 2009 the AAA Commercial Business-to-Business caseload increased 27%, expanding from 4,229 cases in 2005 to 5,388 cases in 2009. (Boyle, 2010).

ADR differs from litigation in that it is based more on cooperation in dispute resolution. The parties have more control over the process than would be the case in court. They design the dispute resolution mechanisms together and usually jointly select a mediator or arbitrator. The likelihood of serious negotiations between the disputing parties preceding third party mediation or arbitration is high (Barrier, 1998). These changes in the way disputes are resolved has, according to Hayford (2000), been “…reflected in the recent emphasis in the curricula of progressive business schools and executive education programs on negotiation and conflict management skills. Today, well-trained business executives must have a full understanding of their negotiating styles, an ability to diagnose when negotiations are called for, a grasp of the basic elements of the negotiating process and its several constituent sub-processes, and an appreciation of how to exercise power wisely and thoughtfully. The attitude must be: Negotiate first; litigate only as a last resort.”

The trend to ADR in American business clearly elevates the importance of the process elements in the labor relations course, negotiations, and grievance administration. This development strengthens the case for requiring the traditional labor relations course of all business graduates or providing such training elsewhere in the business curriculum.

Taken collectively, the five trends presented in this section further support the case for requiring a labor relations course for all business graduates or for requiring especially the process elements of the course, grievance administration and negotiations skills, somewhere in the curriculum.
EVOLVING STATUS OF THE LABOR RELATIONS COURSE IN THE BUSINESS SCHOOL CURRICULUM

The 1977 study described previously was replicated in 2002 and again in 2010. The business schools at the same fifty universities which had been selected earlier were again the subject of a curriculum analysis. The methodology was modified slightly in that their curricula were obtained from their current catalogs, accessed through their business school websites. The results of this analysis are displayed in Table 2.

### TABLE 2

**STATUS OF THE LABOR RELATIONS COURSE IN BUSINESS CURRICULA AT THE UNDERGRADUATE LEVEL, 2002 COMPARED WITH 2010**

<table>
<thead>
<tr>
<th>Status in the Curriculum</th>
<th># of Schools, (N=50)</th>
<th># of Schools, (N=50)</th>
<th>% of Sample 2002</th>
<th>% of Sample 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LR course required of all business majors</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2. LR course on a list of courses from which one to N are required of all business majors</td>
<td>1</td>
<td>3</td>
<td>2%</td>
<td>6%</td>
</tr>
<tr>
<td>3. LR course required of all management majors</td>
<td>5</td>
<td>0</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>4. LR course required as part of an LR or HRM concentration or major</td>
<td>4</td>
<td>6</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>5. LR course on a list from which students are required to select one to eight courses as part of an LR or HRM concentration</td>
<td>5</td>
<td>11</td>
<td>10%</td>
<td>22%</td>
</tr>
<tr>
<td>6. LR course is in a required category for management majors with an HR course where one or the other must be taken</td>
<td>0</td>
<td>0</td>
<td>%0</td>
<td>%0</td>
</tr>
<tr>
<td>7. LR course is included on a list of specialized courses for management majors with courses such as wage and salary administration, selection, performance evaluation or leadership skills; students are required to choose one to three from the list</td>
<td>8</td>
<td>2</td>
<td>16%</td>
<td>4%</td>
</tr>
<tr>
<td>8. LR course is a free elective</td>
<td>6</td>
<td>8</td>
<td>12%</td>
<td>16%</td>
</tr>
<tr>
<td>9. LR course is not offered</td>
<td>17</td>
<td>21</td>
<td>34%</td>
<td>42%</td>
</tr>
</tbody>
</table>

An analysis of the labor relations course in the 2002 and 2010 business curricula demonstrated some movement within requirements categories but the net effect was clearly a continual degrading of the importance of the course. In almost every curriculum requirement category analyzed in the 1977 study, the 2002 and 2010 profiles show a decline. It is also apparent that most schools still did not view the LR course as having general utility for all business majors. In all three survey years, 1977, 2002, and 2010, no schools required the course of all business majors. One school in the 2002 and three schools in the 2011 study put the LR course on a list of courses from which one to three were required of all business majors.
In 1977 the labor relations course was never required of all management majors. By 2002, 10%, had made the course mandatory for all management majors. This was the one noticeable change which suggested a recognition of the general utility of the contents of the traditional LR course. For these five schools the course was required even within concentrations in the management curriculum such as entrepreneurship or international management, which do not directly focus on labor or human resources issues. In 2011 update this trend was reversed, with no schools requiring the course for all management majors, thus demonstrating a general decrease in the status of the LR course in the curriculum.

The most logical point for requiring an LR course is in a labor or human resources major or specialization within a management major. In the 1977 study 28% of the schools sampled had that requirement. By 2002 the percentage dropped to 8% but by 2010 had increased slightly to 12%. In addition to the required category for LR or HRM majors, by 2002 five schools did not require the course within an LR or HRM specialization but the course was on a short list from which the students were required to select from one to eight courses. This number had increased to eleven in 2010. Some of this shift can be explained as some schools shifted the labor relations course from required to optional. For a few schools however this represents a shift from “free elective” status to at least “suggested” or “recommended” status.

In the initial study there were three schools (6%) where all management majors were required to take either a labor relations course or a human resources course to fulfill the major requirements in management. In both 2002 and 2010, no schools had that requirement. In 1977, 36% of the schools in the sample offered a labor relations course as a free elective for all business students, regardless of major. That percentage declined to 12% in 2002 but increased to 16% in 2010.

Finally, in the initial study, four schools or 8% of the sample did not even offer a course in labor relations. That number had increased to thirteen (26%) in 2002 and by 2010, twenty-one schools (42%) did not have an LR course in their curriculum.

Based on the evidence from the 2002 and 2010 studies, the labor relations course appeared less frequently in the business school curriculum and was less often required or recommended than was the case in 1977. Between the 2002 and 2010 reviews, the LR course was required in only one category (HRM or LR major/concentration). The labor relations course is, on net, continuing to be perceived as less important in the mix of business courses offered than was historically the case. The one notable exception is that a labor relations course is now (2010) being included more frequently as an option which can be selected from a list of approved courses for management majors and human resources and labor relations majors or concentrations within a management degree.

The shifting pattern of union membership is likely the justification for curriculum planning committees in eliminating or diminishing the importance of the LR course. This action however ignores the increasing importance of the process elements of the course, negotiations and grievance processing, as critical skills for all business graduates. The other trends identified earlier, increasing legal regulation of the employment relationship, rising frequency of formal grievance systems in non-union employment, increasing incidence of employee grievances and employment related litigation, and the increasing utilization of negotiations and arbitration across a broad range of business issues not limited to the employment relationship, collectively make a strong case for requiring training in negotiations and grievance administration of all business graduates.

Downgrading the labor relations course in the curriculum also seems to ignore the trend of increasing unionization in public employment and downplays the significance of the nearly 12% of the workforce who are covered by union contracts. It could be that curriculum planners believe the description elements for the LR course, including labor law, labor history, union structure and organization, and contract content are sufficiently covered in a general business law course. The curriculum reviews in 2002 and 2011, do show that all schools surveyed require a general business law class in some form of all business majors. The treatment of labor law in these courses varies somewhat but is generally modest. A review of five contemporary business law texts used in these courses, selected randomly from course syllabi from
the fifty schools surveyed, typically showed one chapter or sub-chapter (ten pages or fewer) with a description of the basic laws governing management-union relations in four of the five, along with a listing of unfair labor practices. On average, these texts offer two applications cases, dealing mainly with unfair labor practices (Beatty and Samuelson, 2008; Mann and Roberts, 2008; Kubasek, Brennan, Brennan, and Browne, 2009; Cheeseman, 2010; Cross and Miller, 2012). The likelihood that large numbers of business graduates have only cursory training in labor law and no training in the other descriptive elements of the traditional LR course, labor history, union structure and organization and contract content is high. This curriculum omission makes them likely candidates for dealing ineffectively with labor unions and contracts and for committing unfair labor practices where they are employed in unionized settings or when union organizing drives occur in non-union firms.

In the original study the knowledge and skills taught in the labor relations course were not treated in depth anywhere else in the business curriculum. As a consequence the argument was posited that the labor relations course should be elevated in importance and required across all business majors or other courses should be developed and required to provide business graduates with negotiations and grievance administration skills and at least enough knowledge of labor law and the structure of the labor movement to conduct themselves prudently during union organizing campaigns and avoid committing unfair labor practices. Although the LR course has continued to decline in importance in the business curriculum, the need for the skills contained therein has clearly increased. We therefore reviewed the curricula of the schools in the survey to see, as per our original suggestion, if there have been other courses added which contain the process elements from the LR course, negotiations and grievance processing.

CURRENT STATUS OF NEW COURSES IN NEGOTIATIONS, CONFLICT RESOLUTION AND/OR GRIEVANCE PROCESSING IN THE BUSINESS SCHOOL CURRICULUM

As shown in Table 3, in the 2002 study seventeen schools, or 34%, had added new courses dealing with negotiations and grievance administration. In every case these courses were designed for business situations in general and may or may not include a subsection dealing directly with labor relations or human resources management. Although none were required of all business majors, six, or 35% of those having such a course required the course for all management majors. By 2010 the number of schools which had such courses had increased to twenty-eight, or 56% of the schools surveyed. This represents a 65% increase between 2002 and 2010. The current status of these new courses in negotiations, conflict management, and/or grievance administration, comparing 2002 with 2010, is summarized in Table 3.

When the current business school requirements for a traditional LR course are viewed in tandem with the requirements for these new negotiations and grievance administration courses the following conditions are extant:

1. Of the seventeen schools in the 2002 survey which did not offer a traditional labor relations course anywhere in the curriculum, nine had added new courses in negotiations, conflict management, and/or grievance administration, courses intended for application beyond labor relations and human resources management. The remaining eight schools had no formal courses dedicated to any labor relations topic and no coursework designed to provide students with training in the skills areas of negotiations and grievance administration outside the labor relations or human resources contexts. By 2010 there were even more schools not offering a labor relations course at all, twenty-one or 42% of the schools in the survey. Of those not offering an LR course, eight offered a course in conflict resolution, negotiations, and/or grievance administration. The number of schools which did not offer a traditional LR course or a course providing training in the skills areas of negotiations, conflict resolution, or grievance administration had increased to thirteen, up from eight in 2002. Although the number of new dispute resolution courses has increased significantly between 2002 and 2010 (seventeen contrasted to twenty-eight), it is significant that schools which do offer a labor relations course are more likely to offer additional coursework in the area of conflict resolution beyond a labor relations context. Those which do not offer a labor relations course are less likely to have added a conflict resolution course.
2. Across the seventeen schools which had added a new course in negotiations, conflict management, and grievance administration in 2002, none required the course of all business majors. By 2010 there were 28 schools offering such courses, but still, no schools required these new courses of all business majors. Only six (35%) required the course for all management majors in 2002 and by 2010 the number had declined to just two schools, (4%). Most of the others (eight schools, 47% in 2002 and eleven schools, 22% in 2010)) placed the course on a list of three or more courses from which management majors could pick one. In 2002 one school offered a new conflict resolution course which was on a list of three or more courses from which HRM or LR majors must select on. By 2010 the number of schools with this requirement increased to three schools. In 2002 three schools (18%) showed their new course as a totally free elective. This number had grown to twelve schools by 2010. These courses were obviously not yet recognized as being very important in business school curricula.

3. When the analysis of the traditional LR course and the new courses in negotiations, conflict management, and/or grievance administrations were considered simultaneously, the conclusion in 2002 was that at every business school in the survey, all majors except management, if they so exercised their options in selecting courses, could graduate with no training in labor relations. Even more disconcerting, business students could opt to graduate with no training or skills development in negotiations, conflict management or grievance administration in any business context. Even for management majors, just five schools required a labor relations course and six others required one of the new courses in negotiations, conflict management and grievance administration. This constitutes just 22% or only about 1/5 of the business schools in the survey. By 2010 there were no schools which required a labor relations course for even management majors and the number of schools requiring a conflict management course for management majors had receded from six to two.

<table>
<thead>
<tr>
<th>Status in the Curriculum</th>
<th># and % of Business Schools which had a New Course, 2002</th>
<th># and % of Business Schools which had a New Course, 2010</th>
<th>% Change, 2002 - 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools with negotiations, conflict management and grievance administration courses</td>
<td>17-34%</td>
<td>28-56%</td>
<td>+ 65%</td>
</tr>
<tr>
<td>New course(s) required of all business majors</td>
<td>0-0%</td>
<td>0-0%</td>
<td>0%</td>
</tr>
<tr>
<td>New course(s) required of all management majors</td>
<td>6-12%</td>
<td>2-4%</td>
<td>-67%</td>
</tr>
<tr>
<td>New course(s) on a list of specialized courses for management majors where students select one from a list of three or more courses</td>
<td>8-16%</td>
<td>11-22%</td>
<td>+38%</td>
</tr>
<tr>
<td>New course(s) on a list of specialized courses for HRM or LR majors or concentrations where students select one from a list of three or more courses</td>
<td>1-2%</td>
<td>3-6%</td>
<td>+200%</td>
</tr>
<tr>
<td>New course(s) are free electives</td>
<td>3-6%</td>
<td>12-24%</td>
<td>+300%</td>
</tr>
</tbody>
</table>
CONCLUSION AND RECOMMENDATIONS

This study reviews our earlier work (1977) wherein we investigated the labor relations course in terms of its place in the business school curriculum and its content. The results indicated that the course occupied a position of secondary importance. In our sample the course was never required of all business majors, nor was it ever required of all management majors. All students could graduate with a business degree and avoid the course and its contents entirely. Part of the reason for this low status appeared to be the failure of educators to recognize the importance of the process elements of the course, negotiations and grievance administration. The recommendations were that the labor relations course be elevated in stature and required of all students, not only to help them deal with labor relations and human resources problems more effectively, but to provide them with critical skills in negotiations and grievance administration that were generally applicable across a broad spectrum of business problems.

The 1977 study was replicated in 2002 and 2010 to identify changes that have taken place during the thirty-three years spanning the three surveys. Analysis of the 2002 business curricula from the schools in the sample showed that the labor relations course had become even less prominent since 1977, was never required of all business majors and rarely required (just five schools) for all management majors. By 2010 there were no longer any schools requiring a labor relations course of all management majors. In 2002 the number of schools even offering a labor relations course had increased to thirteen schools where in 1977 only four schools had no labor relations course in the curriculum. By 2010 the number of schools without such a course had risen to twenty one, or 42% of the schools surveyed.

Five contemporary trends were identified, which if taken collectively, comprise the argument that the process components of a traditional labor course, negotiations and grievance administration, are significantly more important now than they were at the time of the initial study. As the logical case for elevating the status of the contents of the traditional labor relations course has strengthened, the course has been further de-emphasized in business school curricula. Over the thirty-three years captured in our surveys, it is clear that it is possible for most business students to graduate without a labor relations course and without receiving instruction or training in the important processes of negotiations and grievance handling in a traditional LR course. This leads to inadequately prepared managers who are prone to be ineffective in negotiations of all types and in processing employee grievances, and unprepared to deal with organizational conflict, regardless of its causes.

This study however documents an encouraging trend, wherein by 2002, 17(34%) of the schools had added a course in negotiations, conflict management and/or grievance resolution designed for broad applications, not limited to labor or human resources issues. Such courses could fill the void in management education which exists as a consequence of continued de-emphasis of the traditional LR course. By 2010 the number of schools offering such a course(s) had grown to 28(56%). While these new courses were never required of all business majors and rarely for management majors (just two schools), they are increasingly appearing on short lists of courses in management majors, human resources management majors, or specializations, and labor relations majors or specializations where students can select one course. Still, almost all business majors can complete a baccalaureate degree while avoiding any instruction in labor relations or conflict management. In U.S. business schools, between 1977 and 2010 there are fewer schools offering a labor relations course but more schools offering a conflict resolution course of some kind. The number of schools suggesting the students take one or the other has increased, but there are no schools requiring one or the other for all business majors. Beyond a few selected management majors or specializations, almost all students in U.S. business schools can graduate with labor relations or conflict resolution skills.

In summary, several changes in the business school curriculum seem necessary to prepare business school graduates to be effective in the current business environment. First, the current practice of adding new courses specifically dealing with negotiations and conflict resolution beyond employment issues should be expanded. Business curricula should be structured in such a way that all business graduates have access to training in resolving disputes across a wide spectrum of business issues.
Second, since it is well documented that conflict is increasing in the employment relationship and formal grievance systems are expanding dramatically in non-union firms, these new courses should contain a section dealing with employee relations and therein should systematically address the issues of conflict management and the processes of negotiations and grievance administration in both non-union and unionized settings.

Third, given the growth of ADR, negotiation and mediation as alternatives to litigation in settling a broad range of business disputes, where new negotiations and dispute resolution courses have been added, they should include treatment of ADR concepts and practices. Where a traditional LR course exists, its content should be broadened to include more generally applicable ADR skills and experiences.

Fourth, either a traditional labor relations course or one of the new courses should be required of all business majors so that students have basic familiarity and skills in negotiations, conflict resolution, and grievance administration. In the 2002 study, of fifty schools surveyed, eight have neither course in the curriculum containing this material. By 2010 that number had increased to ten. Of the forty schools that have one or the other or both, none require one of the new courses or a traditional LR course of all business majors.

Finally, in spite of several decades of decline in the percent of the workforce unionized, currently about twelve of every one hundred workers are employed under union contracts. Many business graduates therefore will manage in unionized settings in their careers. Though the probability has declined in recent decades, those who manage in non-union firms are still subject to union organizing drives, the majority of which result in unionization. In 2009 the National Labor Relations Board conducted 1,304 union representation elections and the union won sixty-six percent of these elections (Union Representation Elections, BLS, 2010). The prospects for business graduates managing in a unionized firm or facing a union organizing drive at some point in their careers are real. Where business schools have eliminated or de-emphasized their traditional labor course, they should be sure labor law and institutions are included in required courses such as business law or human resources management.

Business schools should strongly consider structuring their curricula in such a way that all business graduates will be familiar with labor institutions and labor law and be capable of avoiding unfair labor practices. Most importantly, they should strongly recommend or require coursework in negotiations, conflict resolution, and grievance administration which can be applied across a broad range of issues, including, but not limited to labor relations and human resources management.

LIMITATIONS AND OPPORTUNITIES FOR FUTURE RESEARCH

The 1977, 2002, and 2010 studies reviewed the status of labor coursework at the undergraduate level in U. S. business schools but did not explore the graduate curriculum. An interesting and potentially valuable addition to the current research would be to replicate the study in the MBA curriculum, which produces a significant component of practicing middle and upper level managers who fill middle and upper level staff and line positions.

The current study surveys only what is presently taught and what is required in terms of labor coursework. It does not attempt to ascertain what percentage of students in U. S. business schools at the undergraduate level actually select labor and labor content courses when they are given the option. A valuable addition to our understanding of the preparation of current business graduates would be to develop a methodology to measure actual enrollment choices.

Yet another area of interest would be to survey practicing managers in terms of the importance they ascribe to the curriculum content issues raised in this study. Consistency in their experience and judgment and the recommendations put forward in this study would go a long way in substantiating the case for additional labor coursework and labor content in the business curriculum.

REFERENCES


Contingent Faculty Members: A Just-in-Time Work Force for Universities

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Virtually no theoretical framework has been developed to enhance understanding of contingent faculty and work behaviors from the individual or organizational perspective. Little is known about this temporary work force increasingly providing education to students, because there is a paucity of research literature to inform scholars, administrators, and other stakeholders of higher business education. Universities cutting costs are relying more heavily on the just-in-time work provided by contingent faculty members. The purpose of this paper is to explicate the profile of contingent faculty as defined by available literature and the multiple issues related to the increased use of contingent faculty.

INTRODUCTION

The profile of post-secondary faculties has changed considerably since the 1970s. The majority of the instructors are now “outsourced” (Ziegler and Reiff, 2006), and the ranks consist of more contingent faculty (National Center for Education Statistics, 2002-2003; American Teachers Federation, 2010). In a recent article published in The Chronicle of Higher Education (Schmidt, March 30, 2012) the author writes that “…more than four fifths of the faculties of two-year public colleges, more than two-thirds of the faculties at private four-year colleges, and more than half of the faculty at public four-year colleges” (p. 1, 8) are adjuncts. For the purposes of this paper, the definition of contingent workers provided by Zeidner (2010) will be used. Zeidner’s (2010) definition of contingent workers includes independent contractors and temporary help. The authors acknowledge that there are other positions, e.g. lecturers and instructors, which may share some of the concerns expressed for contingent workers, and while they may not be included in the definition for this paper, they may be mentioned as sharing similar issues.

The proliferation of contingent faculty members (i.e., Wolfinger, Mason and Goulden, 2009) has been increasing since 1975. Feldman and Turnley (2001) note that some universities, e.g. for-profit institutions, rely completely on contingent faculty. Leslie (1998) and Jones (2002-2003) note competing job opportunities which contribute to fewer full time faculty members, where doctorally qualified faculty members can increase earning potential by moving into private industry jobs, so attracting full-time, qualified faculty is not easy. Further, the field of post secondary education is projected to grow by 15% from 2008-2018 (Bureau of Labor Statistics, 2011) indicating continuing pressure to fill empty instructor
Finally, significant numbers of tenured faculty are considering retirement (Jones, 2002-3). Taken together, these factors drive the increasing need to use contingent faculty.

While contingent faculty help absorb increases in enrollment, no evidence is available to indicate that these contingent faculty members are replacing other responsibilities that are considered the work of the faculty, including research and service work (Leslie, 1998). In undergraduate studies, contingent faculty members are committed to teaching; yet, they are less likely to be doctorally qualified, and they spend little time, if any, on research (Leslie, 1998). Unfortunately, this information as well as other available research (Wyles, 1998; Leslie, 1998) is now well over ten years old, and limited research is available to reflect current conditions.

The impact of an aging workforce also impacts the use of contingent faculty. Jones (2002-2003) provided evidence that those teaching are beginning to retire in greater numbers. Bonoan and Viner (2008) explained the impact of Baby Boomer retirements on higher education, not only in the significant numbers of faculty who will retire but also in the loss of continuity and institutional knowledge. With more than a quarter of the American workforce reaching retirement age in 2010, the need for well qualified faculty members has become critical (Bonoan and Viner, 2008).

Although the use of contingent faculty has increased, there is little research that can clarify the impact that the increased use of contingent faculty has created in the classroom. This is a growing concern, because Haeger (1998) suggested most departments do not understand the problems created by the increased use of contingent faculty. Ehrenberg and Zhang (2005), for example, find that low graduation rates are associated with the use of large numbers of contingent faculty at public universities. With the current focus on learning outcomes, assurance of learning, accountability, and quality in the classrooms, it is not clear why the academic community is not more interested in examining how the use of contingent faculty, the use of fewer full-time faculty, and the classroom environment contribute to student performance and student learning, and, ultimately, the value they bring to employers. There is, however, some evidence that use of contingent faculty members does not impair overall organizational quality. Richland College, a member of the Dallas (Texas) Community College District, was the first community college to win the Malcolm Baldrige National Quality Award (2005) while using a faculty staffed by 60% contingent members (Baldrige National Quality Award, 2012).

FINANCIAL PRESSURES

Leslie (1998) indicates that financial need accounts for the use of contingent faculty and that part of the financial problem is caused by an increase in enrollments without an accompanying increase in institutional income. This creates a need for more faculty positions without providing funding for full faculty level salaries. Instead, it drives the need for lower salaries with no benefits to be paid to contingent faculty. Wallin (2004) concurred with the issue of financial stress in higher education, noting 1) the increase in enrollments and 2) how the use of contingent faculty allows administrators to react quickly to environmental demands. More recently, Hemaida and Hupfer (1994/1995) explained how cutbacks at the federal and state government levels have created budget issues in state-supported higher education; costs, faculty and staff compensation, quality of teaching, and making higher education more available for everyone has been noted as an issue since the early 1970s.

Ziegler and Reiff (2006) concurred that financial pressures are behind the increase in usage of contingent faculty. These included financial or fiscal pressure and the push for expansion or development of new markets. Using contingent faculty in new programs or while expanding markets also provides flexibility and resource preservation where more expensive full-time faculty do not have to be assigned, because future demand is not yet known. Commitments can be made to the program without creating long-term obligations by dedicating tenured faculty. Financial issues were also identified by Haeger (1998) in explaining the situation at Towson University. He noted that budget constraints and that budget reduction through attrition of full-time faculty was a strategy, and the salary savings were reallocated as operating funds.
The Bureau of Labor Statistics (BLS) (n.d.) has shown that the number of tenure-track positions is declining as institutions seek flexibility in dealing with financial matters - as previously noted by other literature - and changing student interests. Institutions are relying more heavily on limited-term contracts and contingent faculty members, thus shrinking the total pool of tenured faculty. Limited-term contracts, typically for two to five years, may be terminated or extended when they expire and generally do not lead to the granting of tenure. In addition, some institutions have limited the percentage of the faculty that can be tenured.

THE CONTINGENT FACULTY PROFILE

The AFT (2010) survey on contingent faculty reported that 57% of the faculty surveyed said they teach because they enjoy it. Overall, approximately 50% preferred part-time work, and approximately 47% prefer full-time work. Yet, for those over 50, 60% would prefer full-time work. While 62% overall are mostly satisfied with their jobs, those in four-year public institutions were less satisfied. Fifty-seven percent agreed that their salaries fall short and insurance was an issue while 28% have health insurance and only 39% say they have retirement benefits (AFT, 2010). Overall, 52% are male, 48% are female; 33% are in the age range 18 to 44; 31% are 45-54, and 36% are 55 and over. The satisfaction levels at two-year colleges show 68% are very satisfied with overall job conditions as are 67% at private four-year institutions. However, only 50% at four-year universities were satisfied, and those who would prefer to work full-time are less satisfied with working conditions (AFT, 2010). When asked what improvements they would like to see, the faculty members (29%) first noted an improvement in healthcare benefits, and 22% wanted more job security (AFT, 2010); about 29 % of postsecondary teachers worked part time in 2008.

Leslie (1998), in discussing community colleges, identified a disproportionately large number of women were serving as contingent faculty, because nearly half the women employed were contingent workers rather than full-time employees. This was a significantly larger number than their male counterparts; males were more likely to be full-time instructors. Markey, Hodgkinson, and Kowalczyk (2002) found that this feminized workforce does not enjoy the same level of opportunities for employee participation and has a lower sense of empowerment. Wolfinger et al. (2009) found that fewer women were earning tenure-track appointments than men. These differences indicate that women are less likely to have input into work issues even though they provide a significant amount of the workforce. However, contingent faculty received tenure-track positions more frequently than those who left academia altogether (Wolfinger et al, 2009). One can conclude that a contingent position appears to provide an opportunity for any eventual full-time appointment because of the consistent ties to education.

A forecast from The Bureau of Labor Statistics (BLS, n.d.) 2010-11 regarding the outlook for postsecondary teachers (see Figure 1) provided future predictions on what can be expected in post-secondary education. Community colleges, career education programs and similar institutions will offer a considerable number of part-time and renewable appointments; this should provide opportunities for those with master’s degrees. However, Nealey (2008) noted that there are not enough younger faculty members to replace the faculty who have recently retired and will be retiring. More than 54% of full-time faculty members in the US in 2005 were older than 50 and only 3% of faculty members who are at age 34 or younger are in positions that typically lead to tenure-track or tenured positions (Nealey, 2008).

Contingent Faculty Employment Issues

Fulton (2000) explained that although administrations are blamed for the poor treatment of contingent faculty, i.e. low salaries and poor benefits, in reality, the administrations are responsible to other stakeholders including taxpayers, state government, parents, and students to maintain low tuition levels and provide competitive salaries for tenured, full-time faculty. The balancing act of fulfilling fiduciary responsibilities while maintaining a fully functioning university continues to drive employment of contingent faculty, a trend that is being felt throughout many areas. However, there are numerous issues that are associated with employment of contingent faculty, including: 1) contingent faculty members not
being included in department meetings or on committees even though some issues are relevant to contingent faculty; 2) there was an absence of support, equipment offices and telephones as well as the 3) lack of computer resources, 4) inadequate compensation, 5) lack of benefits and 6) no systematic approach to notification of teaching opportunities for contingent faculty (Haeger, 1998; Schineriov, 2003; Colorado Commission on Higher Education, 2007). There was also a lack of guides and handbooks on services, expectations, policies and calendars to provide important dates (Haeger, 1998; Wallin, 2004). Research by Feldman and Turnley (2001) provided areas of satisfaction and dissatisfaction for contingent faculty as well as attitudinal differences based on age. Satisfiers included but were not limited to schedule flexibility, coworkers, job autonomy and challenging work. Elements that were dissatisfying where the quality of supervision which included a perception of second-class citizenship as compared to tenured faculty, poor pay and fringe benefits, a lack of advancement opportunities and no job security.

Wallin (2004) explained that contingent faculty typically cover multi-section courses or act as replacements for full-time faculty until they return. Contingent faculty members are usually hired for their expertise and experience in specific areas, and they bring fewer complications related to the politics of academia as well as increased industry experience, an important contribution to the classroom (Leslie, 1998).

Other issues need to be considered with contingent faculty. These faculty members are less likely to understand institutional policies and procedures, they may lack basic knowledge of pedagogy, and they may be unaware of appropriate teaching techniques (Wallin, 2004). Contingent faculty may not understand the mission of the institution, characteristics of students or what purpose their courses serve in the overall curriculum. Contingent faculty may feel isolated and may lack necessary connections with full-time faculty and administration; this could make them feel unappreciated and marginalized. This was supported by Bethke and Nelson (1994) who explained how contingent faculty perceive that their lack of status contributes to isolationism, being unappreciated and, in some cases, rejection. Full-time faculty may even avoid getting to know them, thus reinforcing the perception that nobody cares.

The New Mexico Higher Education Department (2007, House Bill 384) identified a high turnover rate in contingent faculty with only 9% remaining since 2000. Hiring practices may partially explain the turnover rate. Only one institution in New Mexico maintained a policy that specifically notes a preference to hire contingent faculty for full-time positions, although this practice varied by disciplines. Schineriov (2003) referred to contingent faculty as the "underclass". He noted that increasing numbers of contingent faculty could be perceived as a threat to tenure, because academic freedom relies on tenure, and with fewer tenured positions academic freedom could become a moot point. Leslie (1998) described an overriding concern that the shared governance, academic freedom and curriculum in general are possibly at risk, because faculty members are becoming more transient and fragmented. With more non-tenure-track faculty members teaching courses in higher education, Schineriov (2003) questioned how the academic traditions related to freedom to experiment, security, continuity, and support professional development along with adequate resources could be preserved when contingent faculty rarely have access to such resources.

**RIGOR AND QUALITY IN THE CLASSROOM**

An on-going concern in universities has been maintaining academic rigor in the classroom. Contingent faculty members are usually less experienced in teaching and not as involved in student advisement or research, and this may adversely affect student achievement. There is also concern that contingent faculty may reduce rigor in the classroom to create better student evaluations of their teaching which would, in turn, result in more employment opportunities (Pisani & Stott, 1998; Sonner, 2000; Kirk and Spector, 2009).

Haeger (1998) expressed concerns about how extensive use of contingent faculty affects the quality in both graduate and undergraduate programs. Kirk and Spector (2009) compared the achievement of accounting students taught by contingent faculty and students taught by full-time faculty. Results indicated that students taught by full-time faculty performed at a significantly higher level than those
taught by contingent faculty, and there was some evidence of contingent faculty assigning systematically higher grades than those assigned by full-time faculty to students.

The concern about quality in the classroom when using contingent faculty was further supported by Sonner (2000) who collected data from a small public university that relied heavily on contingent faculty. This study found that contingent faculty awarded higher grades to students than did full-time faculty. Sonner (2000) noted that it was reasonable to conclude that contingent faculty members who work on a term-by-term basis are reluctant to give lower grades, because this could generate student complaints and result in the contingent faculty member not receiving subsequent offers to teach. Unfortunately, beyond the direct impact of grade inflation, the awarding of higher grades by contingent faculty would pressure full-time faculty to award higher grades, because this could become a student expectation.

However, other studies found no differences in teaching outcomes. Using eight different academic departments, a survey of undergraduate students examined grade distributions and teaching outcomes with demographics (Landrum, 2008). One conclusion was that it is surprising that contingent faculty do as well as they do considering the lack of resources. Another conclusion was that there is no real difference between the outcomes of contingent and full-time faculty; yet, institutions may come to rely on contingent faculty more, because they can accomplish the same with fewer resources. Landrum (2008) expected full-time to perform better than part-time but found no significant differences. Wallin (2004) also noted no differences in the quality of instruction between full-time and part-time faculty members in community colleges.

Kirstein (2009) investigated relationships between faculty qualifications and classroom performance; factors included degree levels, professional experience, scholarship and academic experience. These factors were then compared across student ratings on the effectiveness of instruction on the course evaluations as well as the performance assessment from the primary supervisor of the faculty member. There did not appear to be any correlation between the student survey scores and the number of years of instructor teaching experience. However, Fulton (2000) recommended that part-time faculty should not be teaching core courses and that contingent faculty should be used for specific specialty areas.

Another crucial issue is attitudinal differences between full and contingent faculty members as it relates to cheating in the classroom with contingent faculty members less likely to sanction students who were found to be cheating and less likely to educate students about cheating. Hudd, Apgar, Bronson, and Lee (2009) found that contingent faculty members were more likely to believe that high schools had adequately prepared students to avoid cheating behaviors and that contingent faculty members were less likely to perceive cheating in the environment or to take preventive measures. This study noted the potential for contingent faculty members to undermine a culture of integrity, because there is not a systematic and unified response to the problem of cheating.

SUGGESTIONS FOR MANAGING CONTINGENT FACULTY

Most institutions understand the need to orient contingent faculty whereby contingent faculty members receive instruction on organizational policies, procedures and expectations; however, development of contingent faculty should be an ongoing process (Parsons, 1998). Wallin (2004) notes that the development of contingent faculty members is an investment in the future. For this reason, higher education needs to systematically integrate contingent faculty members into the institution instead of treating them as permanent "outsiders".

There are many possible suggestions to guide institutions that seek to improve the conditions under which contingent faculty are employed. West (2004), Bethke and Nelson (1994), Feldman and Tunley (2001), and Wallin (2004) provide general lists of areas that need to be considered, including providing mentors and professional development opportunities, improving communication and contact between contingent faculty and full-time faculty, providing recognition such as titles and awards for contingent faculty, encouraging participation in meetings, providing facilities such as areas or offices where they can meet with students, obtaining office supplies, and providing access to IT training, orientations and a faculty directory. Opportunities for contingent faculty to provide suggestions in areas such as curriculum
development should also be considered (West, 2004). One important aspect of engaging contingent faculty is to use them for their creativity and ideas, as they can bring both a fresh perspective and recent industry experience. This is especially important in business education where current business practices are an essential element of instruction and are changing to accommodate a hyperturbulent environment. Many of these suggestions are noted in an American Association of University Professors (AAUP) report (2006; n.d.a).

Bethke and Nelson (1994) also suggest a training program for all new contingent faculty members which includes how to write syllabi in addition to a review of program policies and assigning mentors to new contingent faculty members. Communication with contingent faculty can be improved by forming a contingent faculty committee. This committee can include monthly meetings and social events as well as a contingent faculty bulletin board. Ziegler and Reiff (2006) explain how the contingent faculty mentoring program developed at Lesley University. This program emphasizes academic integrity and supports effective teaching and sustained professional collaboration while addressing immediate concerns about adherence to policies and procedures. A mentoring program should also address some of the issues focused on more accountability as well as improved quality and efficiency in the classroom. One specific suggestion from Bethke and Nelson (2004) is to make selections for full-time faculty from contingent faculty. Accepting temporary assignments with the hope of obtaining a permanent appointment appears to be an expectation of contingent faculty, yet there is no information to indicate if this systematically occurs. Leslie (1998) noted earlier that this is often an expectation of contingent faculty, and Wolfinger et.al. (2009) also indicates that chances of being hired into a full-time position are more likely if the candidate maintains ties to academia.

Hueger (1998), Wallin (2004), AAUP (2006) and Bethke and Nelson (1994) provide numerous suggestions to guide institutions who want to provide better support to contingent faculty members. The expectation is that improved support will translate into improved classroom environment and, ultimately, improved student performance. Some of these suggestions include 1) a training program for all new contingent faculty members about writing syllabi and a review of program policies as a condition of employment, 2) establishing and using a mentoring process, 3) introducing new contingent faculty to full-time faculty and experienced contingent faculty members early in the term, and 4) establishing office hours as required to both meet students and learn more about the institution by being present. Pisani and Stott (1998) recommend faculty development for contingent faculty members as fulfilling the educational mission of the university to provide ongoing education to all stakeholders.

Administrators should encourage teaching observations between contingent faculty members and full-time, provide opportunities for contingent faculty members and full-time faculty members to discuss professional issues, and create a faculty directory that includes both full-time and contingent faculty. Morale could be improved by establishing an office and phone for contingent faculty members; institutions could also consider offering service awards and create titles for contingent faculty who have been with the institution for many years and for those who have demonstrated exemplary teaching. Contingent faculty members also need opportunities to interact with full-time and opportunities to participate in decision-making. Basic office supplies for contingent faculty members could also improve morale. Finally, institutions should provide an contingent faculty members faculty handbook; information specific to the location is necessary if the institution has multiple locations. The handbook should also contain “teaching tips,” grading standards, instructional techniques, discipline policies, emergency procedures, library resources, and examples of a course syllabus (Wallin, 2004). Wallin (2004) suggested that many institutions may have provided one or two, or even a few of these suggestions but few institutions have a comprehensive approach to managing their contingent faculty. In addition to many of the areas already noted, West (2004), specifically noting business contingent faculty members, concurred with these suggestions and added recommendations to have contingent faculty visit classrooms, have midterm evaluations and attend an effective teaching seminar. Administration should also conduct surveys with contingent faculty, especially follow-up surveys to determine what can be changed or improved to enhance their performance and then acting as appropriate on the results including communicating back to the contingent faculty about what will be done as a result of the data collected.
Maldonado and Riman (2008-2009) provide an example of the online faculty development program at the Center for Excellence in Teaching at SUNY. This program includes material that is accessible online including, but not limited to, video discussions, conferencing and printable material. Bershbeck (2010) recommends that teaching internships be required for graduate business students who plan to go into teaching. Early preparation of potential instructors would benefit both the hiring institution and the new business instructor. Yantz and Bechtold (1994) provide an example of the development of a college teaching center that is open to the community. The teaching center includes roundtable discussions with topics which relate to the college and various software programs. The target audience for the teaching center is full-time and contingent faculty at the community college and K-12 educators in the community. A master teacher certificate can be earned based on professional development curriculum and salary increases are based on completion. There are also teaching excellence awards for contingent faculty members. For those completing the master teacher curriculum, it is possible to earn a $100 honorarium and to serve as a mentor. This also makes those completing the curriculum eligible for a $500 honorarium and a teaching excellence award.

DISCUSSION

While many of the suggestions from the available literature can guide institutions in their quest to improve relations with and understand contingent faculty members, most suggestions are couched in terms that make them far too broad to be truly helpful. For example, prescribing that an institution “improve communication” is tautological and does not serve to truly inform actual ways to improve communication with contingent workers. Further, the suggestions often overlook the reality of working with contingent faculty members, many of whom are not focused on the life of the university. Contingent faculty members often hold primary positions in other industries or may hold contingent positions at multiple institutions. Anecdotal information indicates that the contingent faculty member may see him/herself as “temporary help” or see the contingent position as less important than a full position. Further, while mentoring is often cited as a means of socializing and developing contingent faculty, there are few examples of well designed programs with measurable outcomes to guide such programs. Coupled with growing workloads for many members of the full faculty in business schools, mentoring is not likely to be a priority for many business professors.

Policies on providing priority consideration to those who have been contingent faculty members when hiring for full-time positions may be a possibility that institutions in higher education wish to pursue because this appears to be a perception, or even an expectation, of some contingent faculty. Such a policy may create a higher level of commitment between a contingent faculty and the institution. An appropriate approach is to conduct systematic surveys with contingent faculty to understand current issues and to address those problems which positively impact the classroom. Although IT issues have been identified as a challenging aspect for contingent faculty in terms of access and training, IT alone will not solve the problems, because the social aspects such as relationship development, contact with other faculty members, and knowledge about policies and procedures are essential knowledge for contingent faculty. A needs assessment will also be part of a systematic approach to addressing the needs of contingent faculty. Accrediting bodies are looking for evidence of research and performance improvement relative to outcomes, and where faculty members are involved, that also means student performance, assurance of learning and test results will be critical aspects in higher education.

One starting point is to work with the positive perceptions of contingent faculty that have been identified earlier in this paper, using the challenge of the work and relationships with professional colleagues as building blocks to begin a more effective collaboration. Another opportunity can be found in working to change the perception that contingent faculty members are second-class citizens within the university by highlighting areas of expertise and by emphasizing the good work of their students. Through the systematic applications of the suggestions provided by research, perceptions will begin to change.
FUTURE RESEARCH

As noted in the abstract of this paper, there is no apparent theoretical underpinning to enhance understanding of contingent work, workers, or work issues. All work behaviors and issues are addressed according to theory that arises from full time work behaviors and issues. As a result, most work in this field studies contingent workers as nothing more than a comparator for full time workers. The underlying assumption of this approach is that the study of contingent work and full time workers is fully informed by an understanding of full time work and workers; however, there is no evidence to support this assumption. Conversely, there is virtually no theory or empirical evidence that suggests that contingent work and full time work are equivalent. A starting place to address this notable gap in the literature is to use a grounded theory approach to building a framework to inform contingent work in all industries, and, especially, higher education, because of the drastic change in the faculty profile. Research needs to investigate other aspects of the increased usage of contingent faculty. Multiple examples have been provided that address only the negative aspects such as poor salaries and the lack of health benefits which are unlikely to change in the near term. A more evidence-based approach to address stakeholder interests is necessary before schools of business can make informed decisions about the future. Rather than looking at what has been lost, it would be more productive to look at the how universities can more effectively balance their needs and wishes with current realities.

CONCLUSION

With the looming shortage of individuals with terminal degrees, fewer tenured positions available, and heavy competition for those that do exist, contingent faculty members are here to stay. There is no indication that the numbers will be reduced. Conversely, a growing body of evidence indicates that industries, including higher education, are moving toward a greater use of contingent workers as a means of controlling costs, increasing strategic flexibility, and acquiring much needed expertise in a speedy manner (Zeidner, 2010). They are, effectively, creating a just-in-time work force to carry out the daily operations of organizations. Consequently, administrators need to consider more effective ways of integrating contingent faculty into the institution. Integration will require engagement and commitment of all stakeholders who are necessary to improve quality. The challenge is to develop a systematic approach to integration such as that suggested by the Baldrige Criteria for Performance Excellence (2012). Integration would also include developing approaches to engage contingent faculty that would indicate that their input is valued and that they are not going to be ignored.

Although current economic and budget issues may prevent an immediate improvement in healthcare benefits and job security, the continual call over the last two decades to improve the conditions of contingent faculty indicates the need to review and improve current conditions. Further, the growing use of contingent faculty members creates an immediate need for more empirical research about this labor sub-population.

Training and professional development are areas that cannot be ignored. Because training and development are expected to have a significant impact in the classroom, administrators may want to consider dedicating funds to support contingent faculty. In some institutions this is already available. Accreditation standards (i.e., ACBSP and AACSB) require faculty development to assure that faculty members are well prepared within discipline as well as in effective teaching methods, thus providing an optimal learning environment in the classroom.

Recently, one of the authors enjoyed a conversation with a manager who is dedicated to training and development for his employees. When asked by other managers why he would allow employees to waste time and money in training when employees are constantly looking for, and receiving, transfers and moving to different positions, the manager replied, "What happens if I don't train them, and they stay?" This also holds true in higher education where faculty training and development has significant ramifications for accreditation status, student accomplishment, and student employability. Improving the
status and skill sets of contingent faculty members speaks to a school’s commitment to provide exceptional resources for students, faculty, staff, and administrators.

REFERENCES


APPENDIX A

TABLE 1

EMPLOYMENT

<table>
<thead>
<tr>
<th>Role</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate teaching assistants</td>
<td>159,700</td>
</tr>
<tr>
<td>Health specialties teachers</td>
<td>155,300</td>
</tr>
<tr>
<td>Vocational education teachers</td>
<td>120,200</td>
</tr>
<tr>
<td>Art, drama, and music teachers</td>
<td>93,800</td>
</tr>
<tr>
<td><strong>Business teachers</strong></td>
<td><strong>85,400</strong></td>
</tr>
<tr>
<td>English language and literature teachers</td>
<td>74,800</td>
</tr>
<tr>
<td>Education teachers</td>
<td>70,200</td>
</tr>
<tr>
<td>Biological science teachers</td>
<td>64,700</td>
</tr>
<tr>
<td>Nursing instructors and teachers</td>
<td>55,100</td>
</tr>
<tr>
<td>Mathematical science teachers</td>
<td>54,800</td>
</tr>
<tr>
<td>Engineering teachers</td>
<td>40,600</td>
</tr>
<tr>
<td>Psychology teachers</td>
<td>38,900</td>
</tr>
<tr>
<td>Computer science teachers</td>
<td>38,800</td>
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<tr>
<td>Foreign language and literature teachers</td>
<td>32,100</td>
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<tr>
<td>Communications teachers</td>
<td>29,900</td>
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<tr>
<td>History teachers</td>
<td>26,000</td>
</tr>
<tr>
<td>Philosophy and religion teachers</td>
<td>25,100</td>
</tr>
<tr>
<td>Chemistry teachers</td>
<td>24,800</td>
</tr>
<tr>
<td>Recreation and fitness studies teachers</td>
<td>21,000</td>
</tr>
<tr>
<td>Sociology teachers</td>
<td>20,300</td>
</tr>
<tr>
<td>Postsecondary teachers, all other</td>
<td>298,000</td>
</tr>
</tbody>
</table>

Measuring the Satisfaction of International Postgraduate Business Students of a British University

Ge Gao
Guangdong University of Foreign Studies

This paper aimed to measure the satisfaction level of international postgraduate business students of a British University. The research focused on the core service delivery of Higher Education - teaching and learning. A two-stage methodology was adopted incorporating a quantitative survey and qualitative semi-structured focus group interviews. The importance-performance analysis (IPA) framework was utilized as the research instrument. The findings revealed that the performance of the Business School was generally below the expectation of students. The IPA matrix has presented the university policy makers with some practical resource allocation strategies. It is suggested that quality improvement efforts should focus on the following areas: student education, student feedback and service recovery, total quality initiative, and staff motivation and development.

INTRODUCTION

The most recent trends in Higher Education (HE) have been characterised by a considerable growth in the inflow of overseas students into countries like the United Kingdom, Australia and the United States (Prugsamatz and Ofstad, 2006). The United Kingdom is one of the leading players in higher education provision to international students. Over the past 10 years the enrolments of students from non-EU countries in UK higher education institutions (HEIs) have increased by 105%. In 2006-07, one in 10 students in UK HEIs came from a non-EU country and one in 20 from an EU country (BBC, 2008). The total number of non-UK students continued to go up steadily between 2005-06 and 2007-08 from 307,040 to 341,790 (HESA, 2009).

It is impossible to quantify the full benefits brought by international students to the UK. The greatest beneficiaries are obviously UK's universities which are increasingly depend on income from foreign students. The Universities UK report said that since 2000-01 university income had grown by more than 50% with the largest share coming from international students. In 2007-08, their tuition fees amounted to £1.7 billion, a rise of 58% since 2002-03 (BBC, 2008). International fees are now a bigger source of income for most universities than research grants, which has been part of their strategy to reduce their reliance on public funding (Ibid). In addition to tuition fees, international students spent over £2.5 billion on living costs in 2004-05 (Vickers and Bekhradnia, 2007).

International students bring more than just financial rewards (Ryan, 2008). By internationalising its education provision, the UK is able to attract intellectual capital to enrich the UK's capacity for research, technological growth and innovation (British Council, 2006). At the cultural level for the university, the international focus of the institution helps their students to develop a global perspective they need to become global citizens in an increasingly globalised world (Bolsmann and Miller, 2008). Moreover, the
university’s international branding and profile can be promoted by the presence of a large number of international students (Knight, 2003).

Over recent years postgraduate programmes have become an increasingly important fiscal resource to many UK business schools (Barnes, 2007). UK’s funding system has made it possible to charge higher fees for postgraduate students on both taught and research programmes (Angell et al., 2008). Tuition fees for undergraduate programmes are regulated by the government, while no upper limit exists as to the price charged for postgraduate education (Barnes, 2007). Consequently, almost 20 per cent of all university places are currently occupied by postgraduate students (UniversitiesUK, 2006), and further expansion is likely to continue well into the next decade (Taylor, 2002). In 2006-07, international students accounted for 66% of full-time taught postgraduates and 50% of full-time research postgraduates at UK universities (HESA, 2009).

Given the increasing importance of non-EU international students to UK HEIs, it appears worthwhile to undertake in-depth research to investigate whether or not they are satisfied with their educational experience. The aim of this paper is to measure the satisfaction level of international students on one-year taught postgraduate business programmes of a British university located in the Midwest regarding their academic experience so that areas leading to student dissatisfaction can be identified to help improve the quality of its postgraduate business education. Objectives of the research are:

- To explore appropriate methodologies to customer satisfaction measure in HE
- To determine what service factors of HE need to be examined
- To investigate the satisfaction level of a representative sample of international students

LITERATURE REVIEW

Importance of Student Satisfaction in Higher Education

In the UK, students are regarded as the “primary customers” of a university (Crawford, 1991). It has been found that students look for evidence of service quality when deciding which university to attend, one of the major decisions in their lives (Donaldson and McNicholas, 2004). It is essential for HEIs to ascribe importance to the measurement of service quality, and realise the competitive nature of attracting students (Angell et al., 2008). Students are indeed customers and universities are in a competitive battle for recruiting them (Sines and Duckworth, 1994).

The Higher Education Funding Council for England (HEFCE) has introduced a National Student Survey to seek the perceptions of final year students on university services concerning teaching, assessment and support. The production of university performance league tables by Government and Funding Bodies is primarily based on the survey results (Douglas et al., 2006). To some extent, the image of a university is affected by its position in any league tables. A poor Image makes it difficult for the university to retain current students and attract potential ones (James et al., 1999).

One main reason why most universities attach considerable importance to student recruitment and retention is that HEFCE aims to increase the UK student population to meet Government targets (Douglas et al., 2006). Satisfactory retention rates will put institutions in a more favourable position to obtain more funding (Rowley, 2003). Student satisfaction is closely related to retention and recruitment. When existing students are dissatisfied, they may have to complete their studies. However, they will be very unlikely to study at a higher level within the same institution and recommend it to others (Douglas et al., 2006). Thus student satisfaction has become a critical issue for universities.

Approaches to Customer Satisfaction Measure in Higher Education

A variety of models have been invented to measure customer satisfaction or service quality. SERVQUAL is a popular service quality model devised by Parasuraman et al. (1985) on the basis of disconfirmation paradigm. They state that the customer’s overall service examination is determined by the gap between “expected” and “perceived” service quality. The model measures five determinant service factors including reliability, responsiveness, empathy, assurance and tangibles (Angell et al., 2008). Cronin and Taylor (1992) proposed an alternative model SERVPERF which only measures the
“performance” of service delivery without relying on the disconfirmation principle (Angell et al., 2008). Since only half the items required of SERVQUAL are necessary for the administration of SERVPERF, it is regarded as a practical, easy-to-manage tool (Babakus and Boller, 1992).

However, neither SERVQUAL nor SERVPERF is wholly suitable for application in HE (Angell et al., 2008). Though SERVQUAL is useful in short-duration service exchanges, it may not be as effective in the university exchange which is longitudinal (O’Neill, 2003). Because students’ “perceptions” change over time (Hill, 1995), SERVQUAL is considered entirely inappropriate, particularly when the time on student perception is unknown (O’Neill, 2003). Meanwhile, owing to the absence of the disconfirmation approach, SERVPERF was unable to capture shortfalls in desired levels of service quality by only assessing the “performance”, making it impossible to prioritise resource allocation (Jain and Gupta, 2004).

A more appropriate approach to service quality measure in HE is the importance-performance analysis (IPA) framework (Angell et al., 2008). The same disconfirmation principle as SERVQUAL was employed by Martilla and James when they constructed the model in 1977. As “an absolute performance measure of customer perception” (Wright and O’Neill, 2002, p. 26), the framework requires the subtraction of “Importance” scores from “performance” scores to see whether disconfirmation exists (Martilla and James, 1977). Another practical function of IPA is to identify the more influential dimensions in the service exchange by evaluating the “importance” assigned to various service dimensions by customers (Wright and O’Neill, 2002).

An additional advantage of IPA is that the researcher is free to decide what service dimensions to measure without rigidly sticking to those prescribed by SERVQUAL (Angell et al., 2008). With a similar diagnostic ability to SERVQUAL, IPA is able to pinpoint where resource allocation is most critical through the use of importance measure (Lovelock et al., 1998). The resource allocation implications of IPA are best reflected by the IP matrix (Angell et al., 2008). Table 1 indicates how mean “importance” and “performance” scale scores are plotted on the matrix.

<table>
<thead>
<tr>
<th>Importance</th>
<th>Quadrant A – high importance and low performance</th>
<th>Quadrant B – high importance and high performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>concentrate here</td>
<td>keep up the good work</td>
</tr>
<tr>
<td>Quadrant C – low importance and low performance</td>
<td>Quadrant D – low importance and high performance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>low priority</td>
<td>possible overkill</td>
</tr>
<tr>
<td>Performance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: adapted from Martilla and James (1977)

**Service Factors to be Measured in Higher Education**

Identification of critical factors in the service exchange should form a key part of measuring service quality in HE (Abdullah, 2006). Approaches to the evaluation of the student experience either focus on assessing teaching and learning or the total student experience. It is widely acknowledged that evaluating totality of the student experience adds a valuable dimension, since teaching and learning is not simply confined to the classroom. The total student experience is becoming an increasingly vital determinant of students’ attitudes to the institution (Aldridge and Rowley, 1998). Nevertheless, the most important theme in HE is still teaching and learning. Quality of the core service delivery significantly influences the overall quality of the service offering (Douglas et al., 2006).

Many researchers seem to be more interested in evaluating student satisfaction from the perspective of total student experience. One of the pioneers in this field is the Centre for Research into Quality at the University of Central England in Birmingham (Aldridge and Rowley, 1998). Utilising the IPA framework,
the Centre undertook an annual survey to assess student satisfaction with a wide range of service factors. One important feature of the research was that the questions were student determined in focus group discussions (Harvey, 1995). Nevertheless, questions entirely determined by students may not cover all the crucial service dimensions which need to be investigated. It is advisable to supplement those questions with attributes identified by other researchers.

Despite the doubted suitability of the application of SERVQUAL in HE, Barnes (2007) adopted a modified SERVQUAL instrument to investigate the expectations and perceptions of service quality among EU and international postgraduate students at a leading UK business and management institution. A number of service factors were added to the five dimensions of SERVQUAL. These were organised under two other dimensions: university (for example, accommodation) and guidance (for example, guidance on cultural issues).

The findings revealed that perceptions of service are influenced more by whether or not students pay themselves than by the price itself. Hence, international students tend to have higher overall perceptions of the service quality than EU students, despite paying considerably more. Moreover, international students appear less critical in terms of service provision and are less inclined to lodge complaints (Barnes, 2007). These valuable findings can help university decision-makers to gain deeper understanding of the varying satisfaction levels of students from different regions and the underlying causes. Therefore, they can differentiate the strategies employed to improve student satisfaction.

Advocating that the IPA framework is more appropriate than SERVQUAL as a measurement tool in HE, Douglas et al. (2006) evaluated student satisfaction with IPA at the Faculty of Business and Law, Liverpool John Moores University. The concept of the service-product bundle was utilised to design the survey questionnaire, which consisted of three elements:

- The physical or facilitating goods (for example, IT facilities)
- The sensual service— the explicit service (for example, staff teaching ability)
- The psychological service – the implicit service (for example, the treatment of students by staff).

It was discovered that the most important attributes were those associated with teaching and learning, while the least important were those related to the physical facilities. The following are some priority areas for improvement (where the importance rating is high and performance rating is low):

- Promptness and usefulness of feedback on performance
- Availability of staff
- Way timetable is organised
- Course workload
- Textbooks’ availability within the Learning Resources Centre
- Responsiveness of teaching staff to requests (Douglas et al., 2006, p 261)

Such findings can help the university utilise resources more effectively to tackle the critical areas for improvement.

It seems that most research focuses on home students or international undergraduate students. Inadequate data have been collected from international postgraduate students. This is surprising considering their economic importance to UK universities (Barnes, 2007).

**RESEARCH METHODOLOGY**

**Sampling Techniques**

The research was targeted at three cohorts of international students on taught postgraduate business programs of a British university. It was conducted in 2009 and during that time the author was an MBA student of this university. A combination of non-probability sampling techniques was used. First, self-selection sampling was employed by inviting all the students known by the author to take part in the research. Data was collected from those who responded. Furthermore, all those students were asked to encourage other students they knew to get involved. The group of respondents gradually expanded as a
snowball sample (Saunders et al., 2007).

Questionnaire Design

Content and Organisation

Aiming to develop a research framework, relevant literature was extensively reviewed to explore service factors relating to teaching and learning in HE. The author has particularly benefited from the National Student Survey conducted by the Higher Education Funding Council for England (HEFCE, 2007). It was decided to primarily use the research framework of the National Student Survey, which comprised the following seven categories: “Course teaching”, “Assessment and Feedback”, “Academic Support”, “Organization and Management”, “Learning Resources”, “Personal Development” and “Overall Satisfaction”.

However, a number of attributes identified from the HE literature were added in order to broaden the scope of the research. Only the vital components of teaching and learning were measured in the study. This focus would help to gain more in-depth insights. Moreover, it would take less time to complete the questionnaire. Statements used in the questionnaire can be found in the Appendix.

The questionnaire began with a brief introduction that explained concisely the purpose of the investigation and also emphasised the assurance of confidentiality and anonymity. The rest of the questionnaire was divided into four sections. A series of demographic questions was asked in Section one to segment the sample population. These included questions regarding gender, age, country of origin, course title, year of study and the number of years of work experience.

Section two focused on the “performance” rating of the university with 22 questions grouped under the above-mentioned seven categories of teaching and learning. Questions on overall satisfaction and inclination to recommend the course were asked at the end. To allow ease of completion, all questions were structured as “closed” statements or questions.

The “importance” of the service attributes was evaluated in Section three. To avoid confusing respondents, the questions were arranged in the same order as they were in the previous section (Dillman, 2000). Section four provided an opportunity for students to make any further comments and obtain some qualitative data.

The rating scale was designed to contain five points representing the possible range of opinions about the service. As shown in Table 2, participants were required to rate the “performance” of the university by means of a 5-point Likert scale.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree strongly</td>
<td>Disagree</td>
<td>Neutral (Neither disagree nor agree)</td>
<td>Agree</td>
<td>Agree strongly</td>
</tr>
</tbody>
</table>

The “importance” placed on each service attribute was also measured with a 5-point Likert scale, as indicated in Table 3.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A little important</td>
<td>Somewhat important</td>
<td>Important</td>
<td>Very important</td>
<td>Extremely important</td>
</tr>
</tbody>
</table>

All the service factors measured in the study were deliberately chosen to represent the vital components of the service delivery. Therefore, only the varying degrees of importance were assessed.
Validity and Reliability

A number of measures were taken to ensure the validity and reliability of the questionnaire. First, a comprehensive framework of service attributes was identified through carefully reviewing the literature. Second, three experts were asked to comment on the representativeness and suitability of the questions, and the overall design of the questionnaire. Additional ideas can be generated and further insights provided by such qualitative inductive approaches (Churchill 1996).

Finally, the questionnaire was piloted among 20 international students, who reflected major variations in the final population. Attention was given to how long it took them to complete the questionnaire. At the end comments were solicited on the usefulness and clarity of the measurement questions, and if any other service factors should be incorporated in the survey. Based on their feedback, some amendments were made to a number of questions and the design of the questionnaire. These measures played a central role in the creation and evaluation of the research instrument and contributed tremendously to the effectiveness of the research.

Research Administration

Rowley (2003) argues that how and when student feedback questionnaires are distributed deserve careful consideration in order to generate a satisfactory level of response. The questionnaires should ideally be presented when the course has come to an end. Such advice was followed in administering the questionnaire. First, questionnaires were sent via internet to 86 international students who had completed their studies (self-selected sample). A total of 232 questionnaires were returned, of which 217 were valid (final sample after snowball sampling). Next, the returned ones were analysed and representative respondents identified for interviews. Finally, semi-structured focus group interviews were conducted to further explore the quantitative findings and relevant issues which were impossible to be examined in the questionnaire.

RESEARCH FINDINGS

Quantitative Stage: Importance-Performance Analysis

The IPA framework (Martilla and James, 1977) was utilised to measure the satisfaction of the respondents. The first step was to calculate the mean importance and performance scores for each of the 20 service attributes.

Importance Analysis

The importance attached by the respondents to the service factors was ranked according to the mean importance scores, which is presented in Table 4.

One outstanding feature is that all the four service attributes directly associated with teaching are high on the list of ten most important service factors. “Subject area expertise”, “Helpfulness with questions”, “Teaching skills” and “Enthusiasm about teaching” were respectively ranked number 1, 3, 4 and 6, which has clearly demonstrated the important role teaching plays in the mind of students. This strongly reinforces the argument of Douglas et al., (2006) that as a core service component at university, teaching is a powerful determinant of the overall quality of the service offering.

Respondents were also very much concerned about what they learn, which is indicated in the number 7, 8 and 9 positions of “Course academic content”, “Improvement of English skills” and “Coverage of vocational topics”. The emphasis on vocational topics shows that students want to see a more direct link between what they learn and their future career prospects. Better English language skills are beneficial to them in securing a job offer from a multinational company. Interestingly, students ranked “Improvement of English skills” higher than “Development of transferable skills”, although transferable skills are also highly valued in the recruitment and selection processes of multinational companies. Probably this is because English language skills are more easily observable and measurable than transferable skills.
TABLE 4  
IMPORTANCE RANKING

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Factors</th>
<th>Ranking</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Subject area expertise (4.62)</td>
<td>11</td>
<td>Course organisation (4.25)</td>
</tr>
<tr>
<td>2</td>
<td>Library resources and services</td>
<td>12</td>
<td>Explanation of academic conventions (4.23)</td>
</tr>
<tr>
<td></td>
<td>(4.59)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Helpfulness with questions (4.49)</td>
<td>13</td>
<td>Development of transferable skills (4.18)</td>
</tr>
<tr>
<td>4</td>
<td>Teaching skills (4.46)</td>
<td>14</td>
<td>Appointments with staff (4.15)</td>
</tr>
<tr>
<td>5</td>
<td>IT resources and services (4.43)</td>
<td>15</td>
<td>Fair marking (4.08)</td>
</tr>
<tr>
<td>6</td>
<td>Enthusiasm about teaching (4.38)</td>
<td>16</td>
<td>Usefulness of assignment feedback (4.06)</td>
</tr>
<tr>
<td>7</td>
<td>Course academic content (4.34)</td>
<td>17</td>
<td>Student feedback arrangements (3.85)</td>
</tr>
<tr>
<td>8</td>
<td>Improvement of English skills</td>
<td>18</td>
<td>Student workload (3.69)</td>
</tr>
<tr>
<td></td>
<td>(4.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Coverage of vocational topics</td>
<td>19</td>
<td>Timely assignment feedback (3.62)</td>
</tr>
<tr>
<td></td>
<td>(4.31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Supporting lecture materials</td>
<td>20</td>
<td>Class sizes (3.54)</td>
</tr>
<tr>
<td></td>
<td>(4.27)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exploring the areas of the service students find relatively less important can also generate some interesting findings. All the three dimensions related to assessment and feedback were ranked rather low. “Fair marking”, “Usefulness of assignment feedback” and “Timely assignment feedback” are positioned at number 15, 16 and 19. Though almost every student is desperate to get high marks in assignments and exams, service factors in related area were assigned comparatively low importance. Seemingly, many students are more concerned about their marks than how they can utilise the assignment feedback to identify areas for improvement. “Student feedback arrangements” is only number 17 on the list, showing that most students fail to understand that student feedback is a vital vehicle to communicate their needs to the university as well as a crucial part of the continuous teaching quality improvement cycle.

Performance – Importance (P- I) Gap Analysis

The next step was to evaluate the performance-importance (P-I) gap, which indicates whether a deficit or surplus exists between the performance and the importance assigned to it (Angell et al., 2008). Mean importance and performance scores together with the P-I scores for all the 20 attributes are presented in Table 5. For the convenience of analysis, the service factors are grouped according to relevant service categories.

A positive “P-I” gap means a quality surplus, indicating that the service attribute is performing above the expectation of students. A quality deficit, a negative “P-I” gap, is certainly of more significance to the management of the university (Angell et al., 2008). Table 6 ranks the P-I values of the 20 service factors, displaying quality deficit for all attributes except for “IT resources and services” and “Class sizes”. Apparently a gloomy picture was painted for the performance of the Business School. The greatest deficits are recorded in “Fair marking”, “Course academic content” and “Coverage of vocational topics” with P-I scores either equivalent to or above -1. The underlying causes of student dissatisfaction with these factors were examined in depth in the follow-up focus group interviews.
### TABLE 5
OVERALL MEAN IPA SCORES

<table>
<thead>
<tr>
<th>Service factors</th>
<th>Mean performance</th>
<th>Mean importance</th>
<th>Performance-importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Teaching (n=9)</td>
<td>3.59</td>
<td>4.23</td>
<td>-0.64</td>
</tr>
<tr>
<td>Enthusiasm about teaching</td>
<td>3.69</td>
<td>4.38</td>
<td>-0.69</td>
</tr>
<tr>
<td>Subject area expertise</td>
<td>3.79</td>
<td>4.62</td>
<td>-0.83</td>
</tr>
<tr>
<td>Teaching skills</td>
<td>3.67</td>
<td>4.46</td>
<td>-0.79</td>
</tr>
<tr>
<td>Helpfulness with questions</td>
<td>3.62</td>
<td>4.49</td>
<td>-0.87</td>
</tr>
<tr>
<td>Course academic content</td>
<td>3.29</td>
<td>4.34</td>
<td>-1.05</td>
</tr>
<tr>
<td>Coverage of vocational topics</td>
<td>3.31</td>
<td>4.31</td>
<td>-1</td>
</tr>
<tr>
<td>Student workload</td>
<td>3.54</td>
<td>3.69</td>
<td>-0.15</td>
</tr>
<tr>
<td>Class sizes</td>
<td>3.64</td>
<td>3.54</td>
<td>0.1</td>
</tr>
<tr>
<td>Supporting lecture materials</td>
<td>3.76</td>
<td>4.27</td>
<td>-0.51</td>
</tr>
<tr>
<td>Assessment and Feedback (n=3)</td>
<td>3.36</td>
<td>3.92</td>
<td>-0.56</td>
</tr>
<tr>
<td>Fair marking</td>
<td>2.92</td>
<td>4.08</td>
<td>-1.16</td>
</tr>
<tr>
<td>Timely assignment feedback</td>
<td>3.54</td>
<td>3.62</td>
<td>-0.08</td>
</tr>
<tr>
<td>Usefulness of assignment feedback</td>
<td>3.55</td>
<td>4.06</td>
<td>-0.51</td>
</tr>
<tr>
<td>Academic Support (n=2)</td>
<td>3.66</td>
<td>4.19</td>
<td>-0.53</td>
</tr>
<tr>
<td>Explanation of academic conventions</td>
<td>3.56</td>
<td>4.23</td>
<td>-0.67</td>
</tr>
<tr>
<td>Appointments with staff</td>
<td>3.75</td>
<td>4.15</td>
<td>-0.4</td>
</tr>
<tr>
<td>Organization and Management (n=2)</td>
<td>3.34</td>
<td>4.05</td>
<td>-0.71</td>
</tr>
<tr>
<td>Course organisation</td>
<td>3.68</td>
<td>4.25</td>
<td>-0.57</td>
</tr>
<tr>
<td>Student feedback arrangements</td>
<td>3</td>
<td>3.85</td>
<td>-0.85</td>
</tr>
<tr>
<td>Learning Resources (n=2)</td>
<td>4.54</td>
<td>4.51</td>
<td>0.03</td>
</tr>
<tr>
<td>Library resources and services</td>
<td>4.46</td>
<td>4.59</td>
<td>-0.13</td>
</tr>
<tr>
<td>IT resources and services</td>
<td>4.62</td>
<td>4.43</td>
<td>0.19</td>
</tr>
<tr>
<td>Personal Development (n=2)</td>
<td>4</td>
<td>4.26</td>
<td>-0.26</td>
</tr>
<tr>
<td>Development of transferable skills</td>
<td>3.85</td>
<td>4.18</td>
<td>-0.33</td>
</tr>
<tr>
<td>Improvement of English skills</td>
<td>4.15</td>
<td>4.33</td>
<td>-0.18</td>
</tr>
</tbody>
</table>

It is clearly revealed that the all the service categories were performing below the expectation of students except for “learning resources”. The category of “Organisation and Management” received the largest “P−I” quality deficit (−0.71). The underlying reason can be traced in Table 6. The university scored rather low for “Student feedback arrangements” (P−I=−0.85). “Course Teaching” (P−I=−0.64) is another area where the university seems to be experiencing difficulty. Among the five worst performing service factors in Table 6, three of them belong to this category. They are “Course academic content” (P−I=−1.05), “Coverage of vocational topics” (P=I=−1) and “Helpfulness with questions” (P−I=−0.87). On the other hand, respondents assigned relatively high importance (I=4.23) to this category.

The third problem area seems to be “Assessment and Feedback” (P=I=−0.56), although the lowest importance (I=3.92) was ascribed to it. Table 6 indicates that “Fair marking” (P=I=−1.16) achieved the greatest quality deficit of all the service factors. This has confirmed the findings in the ISB (International Student Barometer) data showing that international students are particularly dissatisfied with assessment and feedback issues (Ryan, 2008).

More positively, “Personal Development” attained the smallest quality deficit (PI=−0.26), although it was regarded as the second most important category (I=4.26). The best performing service category is “Learning Resources” (P−I=0.03), the only area of service with a quality surplus. Since it was considered
the most important service category (I=4.51), a very high level of performance was required to obtain a quality surplus.

**TABLE 6**
PERFORMANCE – IMPORTANCE (P-I) RANKING

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Factors</th>
<th>Ranking</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IT resources and services (0.19)</td>
<td>11</td>
<td>Course organisation (-0.57)</td>
</tr>
<tr>
<td>2</td>
<td>Class sizes (0.1)</td>
<td>12</td>
<td>Explanation of academic conventions (-0.67)</td>
</tr>
<tr>
<td>3</td>
<td>Timely assignment feedback (-0.08)</td>
<td>13</td>
<td>Enthusiasm about teaching (-0.69)</td>
</tr>
<tr>
<td>4</td>
<td>Library resources and services (-0.13)</td>
<td>14</td>
<td>Teaching skills (-0.79)</td>
</tr>
<tr>
<td>5</td>
<td>Student workload (-0.15)</td>
<td>15</td>
<td>Subject area expertise (-0.83)</td>
</tr>
<tr>
<td>6</td>
<td>Improvement of English skills (-0.18)</td>
<td>16</td>
<td>Student feedback arrangements (-0.85)</td>
</tr>
<tr>
<td>7</td>
<td>Development of transferable skills (-0.33)</td>
<td>17</td>
<td>Helpfulness with questions (-0.87)</td>
</tr>
<tr>
<td>8</td>
<td>Appointments with staff (-0.4)</td>
<td>18</td>
<td>Coverage of vocational topics (-1)</td>
</tr>
<tr>
<td>9</td>
<td>Supporting lecture materials (-0.51)</td>
<td>19</td>
<td>Course academic content (-1.05)</td>
</tr>
<tr>
<td>10</td>
<td>Usefulness of assignment feedback (-0.51)</td>
<td>20</td>
<td>Fair marking (-1.16)</td>
</tr>
</tbody>
</table>

Further examination of the P–I values of various service categories, represented in Table 7, will add a broader perspective.

**TABLE 7**
MEAN IPA SCORES FOR SERVICE CATEGORIES

<table>
<thead>
<tr>
<th>Service categories</th>
<th>Mean performance</th>
<th>Mean importance</th>
<th>Performance - importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Teaching</td>
<td>3.59</td>
<td>4.23</td>
<td>-0.64</td>
</tr>
<tr>
<td>Assessment and Feedback</td>
<td>3.36</td>
<td>3.92</td>
<td>-0.56</td>
</tr>
<tr>
<td>Academic Support</td>
<td>3.66</td>
<td>4.19</td>
<td>-0.53</td>
</tr>
<tr>
<td>Organisation and Management</td>
<td>3.34</td>
<td>4.05</td>
<td>-0.71</td>
</tr>
<tr>
<td>Learning Resources</td>
<td>4.54</td>
<td>4.51</td>
<td>0.03</td>
</tr>
<tr>
<td>Personal Development</td>
<td>4</td>
<td>4.26</td>
<td>-0.26</td>
</tr>
</tbody>
</table>

*Quadrant Analysis*

Quadrant analysis has typically been used to analyse student feedback data in UK universities for a number of years (Douglas et al., 2006). The researcher has to decide where the matrix should be split into the four quadrants (Angell et al., 2008). Martilla and James (1977) proposed that this was a matter of judgment rather than an absolute measure. Mean importance and performance scores were adopted by O'Neill and Palmer (2004) to position the cross-hairs. The same method was used in this study with the cross-hairs on the “importance” and “performance” scale at 4.19 and 3.67 respectively. The left column of Table 8 shows where various services factors are situated on the IP Matrix.
TABLE 8
IMPORTANCE - PERFORMANCE MATRIX FOR INDIVIDUAL SERVICE FACTORS

<table>
<thead>
<tr>
<th>Quadrant A – high importance and low performance</th>
<th>IP Matrix</th>
<th>I(P-I) Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helpfulness with questions (3.62)</td>
<td></td>
<td>Subject area expertise (-0.83)</td>
</tr>
<tr>
<td>Course academic content (3.29)</td>
<td></td>
<td>Helpfulness with questions (-0.87)</td>
</tr>
<tr>
<td>Coverage of vocational topics (3.31)</td>
<td></td>
<td>Teaching skills (-0.79)</td>
</tr>
<tr>
<td>Explanation of academic conventions (3.56)</td>
<td></td>
<td>Enthusiasm about teaching (-0.69)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quadrant B – high importance and high performance</th>
<th>IP Matrix</th>
<th>I(P-I) Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library resources and services (4.46)</td>
<td></td>
<td>Library resources and services (-0.13)</td>
</tr>
<tr>
<td>Subject area expertise (3.79)</td>
<td></td>
<td>IT resources and services (0.19)</td>
</tr>
<tr>
<td>Teaching skills (3.67)</td>
<td></td>
<td>Improvement of English skills (-0.18)</td>
</tr>
<tr>
<td>IT resources and services (4.62)</td>
<td></td>
<td>Supporting lecture materials (-0.51)</td>
</tr>
<tr>
<td>Enthusiasm about teaching (3.69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement of English skills (4.15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting lecture materials (3.76)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course organisation (3.68)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quadrant C – low importance and low performance</th>
<th>IP Matrix</th>
<th>I(P-I) Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair marking (2.92)</td>
<td></td>
<td>Fair marking (-1.16)</td>
</tr>
<tr>
<td>Usefulness of assignment feedback (3.55)</td>
<td></td>
<td>Student feedback arrangements (-0.85)</td>
</tr>
<tr>
<td>Student feedback arrangements (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student workload (3.54)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timely assignment feedback (3.54)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class sizes (3.64)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quadrant D – low importance and high performance</th>
<th>IP Matrix</th>
<th>I(P-I) Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of transferable skills (3.85)</td>
<td></td>
<td>Development of transferable skills (-0.33)</td>
</tr>
<tr>
<td>Appointments with staff (3.75)</td>
<td></td>
<td>Appointments with staff (-0.4)</td>
</tr>
<tr>
<td>Usefulness of assignment feedback (-0.51)</td>
<td></td>
<td>Usefulness of assignment feedback (-0.51)</td>
</tr>
<tr>
<td>Student workload (-0.15)</td>
<td></td>
<td>Student workload (-0.15)</td>
</tr>
<tr>
<td>Timely assignment feedback (-0.08)</td>
<td></td>
<td>Timely assignment feedback (-0.08)</td>
</tr>
<tr>
<td>Class sizes (0.1)</td>
<td></td>
<td>Class sizes (0.1)</td>
</tr>
</tbody>
</table>

The results seem to be encouraging. Seven of the ten service factors of greatest importance are located in Quadrant B. The other three in Quadrant A are “Helpfulness with questions”, “Course academic content” and “Coverage of vocational topics”.

A closer examination of the service factors in Quadrant B will result in a certain degree of concern. The mean “performance” value (3.67) was used to position cross-hairs. Nevertheless, the mean performance scores of three service factors in Quadrant B are either equivalent or very close to 3.67, which means these factors barely performed satisfactorily. These include “Teaching skills” (P=3.67), “Course organisation” (P=3.68) and “Enthusiasm about teaching” (P=3.69). One tentative conclusion is that when the mean performance scores of service factors are very close to the score adopted to position
cross-hairs, the IP matrix may be unable to discriminate for attention those areas of services with potential quality problems.

In this case, the importance and (performance - importance) matrix, abbreviated into I (P-I) matrix, might be a more discriminative tool. When viewed in line with the assigned level of importance, the PI gap pinpointing a quality deficit or surplus may lead to some useful findings. If a certain service factor with a quality deficit is considered very important, this factor deserves more improvement efforts than when it is regarded as less important. If a certain service factor with a quality surplus is considered very important, this factor deserves more efforts to maintain the current performance level than when it is regarded as less important. The right column of Table 8 indicates the location of various services factors on the I(P-I) Matrix. The mean P - I value employed to position cross-hairs was -0.524.

Comparing the results of the two matrices is worthwhile. The previously discussed three service factors, “Teaching skills”, “Course organisation” and “Enthusiasm about teaching”, are situated in Quadrant B on IP matrix. In contrast, they are located in Quadrant A on I(P-I) matrix due to more discriminative quality deficits, which are respectively -0.79, -0.57 and -0.69. There are eight service factors in Quadrant A on I(P-I) matrix, exactly twice the number of those in Quadrant A on IP matrix. Therefore, the results generated from I(P-I) matrix present a more challenging situation to the university than the IP matrix. Among these eight attributes, six of them are related to “Course teaching”. Obviously the university should devote more resources to the improvement of the service delivery in this respect. Similar quadrant analysis was then performed on the six service categories, the results of which are shown in Table 9.

### TABLE 9

**IMPORTANCE - PERFORMANCE MATRIX FOR SERVICE CATEGORIES**

<table>
<thead>
<tr>
<th>IP Matrix</th>
<th>Quadrant A – high importance and low performance</th>
<th>Quadrant B – high importance and high performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Course Teaching (3.59)</td>
<td>Learning Resources (4.54)</td>
</tr>
<tr>
<td></td>
<td>Academic Support (3.66)</td>
<td>Personal Development (4)</td>
</tr>
<tr>
<td>Quadrant C – low importance and low performance</td>
<td>Quadrant D – low importance and high performance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organisation and Management (3.34)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assessment and Feedback (3.36)</td>
<td></td>
</tr>
</tbody>
</table>

The university and Business School policy makers are presented with some practical directions regarding strategic decision-making. Although “Personal Development” and “Learning Resources” are in Quadrant B, continuous improvements are necessary due to their high importance. The top priority of the university is to improve the service delivery of “Course Teaching” and “Academic Support”, which are positioned in Quadrant A. The urgency to improve the service offering of “Course teaching” was also highlighted earlier in this Section by the large quality deficit gained by some service factors in this category.

Since “Assessment and Feedback” and “Organisation and Management” are located in Quadrant C, the matrix suggests that priority should not be given to them. If more resources were allocated to other service categories like “Course Teaching” and “Academic Support”, it would contribute more significantly to the improvement of students’ service quality perceptions.

The findings of this project are different from those of the investigation conducted by Angell et al., (2008) into the service quality perceptions of postgraduates at the Social Science and Business Faculty (SSBF), the University of Plymouth. They found that the “Academic” category is in Quadrant B, including such factors as “Practical skills taught” and “Skilled and engaging teachers”. It seems that considered highly important at both institutions, the “Academic” service delivery of SSBF generally
outperforms that of the School under investigation. However, there is something in common between the two institutions. The service category positioned in Quadrant A in their research is “Industry link” with factors like “Industry contacts provided by tutors”. A similar service factor in Quadrant A in this study is “Coverage of vocational topics”. Therefore, both institutions need to concentrate on improving the “vocational” component of the course.

Analysis of Overall Satisfaction

The final task at the quantitative stage was to explore the implications of respondents’ overall satisfaction and willingness to recommend the course.

Table 10 shows the percentages of the responses to the question: “Overall, I am satisfied with the quality of the course.”

<table>
<thead>
<tr>
<th>TABLE 10</th>
<th>PERCENTAGES OF RESPONSES REGARDING OVERALL SATISFACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree strongly</td>
</tr>
<tr>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>

A majority of the students (54%) responded positively, including those who had chosen “Agree” and “Agree strongly”. Although only 15% of the respondents responded negatively, a significant number of students (31%) took a neutral stand.

Table 11 presents the percentages of the responses to the question: “Would you recommend the course to other students?”

<table>
<thead>
<tr>
<th>TABLE 11</th>
<th>PERCENTAGES OF RESPONSES REGARDING WILLINGNESS TO RECOMMEND THE COURSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would actively encourage people to apply</td>
<td>15%</td>
</tr>
<tr>
<td>If asked, I would encourage people to apply</td>
<td>16%</td>
</tr>
<tr>
<td>I would neither encourage nor discourage people to apply</td>
<td>69%</td>
</tr>
<tr>
<td>If asked, I would discourage people from applying</td>
<td>0%</td>
</tr>
<tr>
<td>I would actively discourage people from applying</td>
<td>0%</td>
</tr>
</tbody>
</table>

The striking feature is evident. An overriding majority (69%) selected to neither encourage nor discourage people to apply. Among those who will encourage people to apply, only 15% will do so actively. These are definitely disappointing results for the university. The findings differ from those in the research conducted by Barnes (2007), which was discussed previously. He found that international students may be more willing to recommend because of the complete experience, of which the educational experience is just one part. The cultural experience also helps to add value. Moreover, willingness to recommend may be a cultural trait. Instead, this study echoes the results of the 2007 StudentPulse survey undertaken by the market research firm i-graduate. They surveyed nearly 12,000 students from 143 countries and discovered that the quality and reputation of the course and lecturers were of more importance than lifestyle, climate and culture (Evening Standard, 2008).

If probing deeper into the data, a mismatch between the perception and behavioural intention can be noticed. Overall 54% of them are either satisfied or very satisfied with the quality of the course. However, only 31% of them will either actively or passively recommend the course. This supports the findings of Blackmore et al. (2006) in their research into student satisfaction. According to their findings, a
considerable number of respondents, many of whom were in their final year, stated that they would not recommend their institution to others, despite the overall acceptable satisfaction ratings.

**Qualitative Stage**

The findings confirmed and enhanced much of the information gathered from the questionnaire. More feedback was offered on “Course teaching” and “Assessment and feedback” than other service categories.

In terms of “Course teaching”, one particular staff member was believed by quite a few participants to be reluctant to help with students’ questions. Though most staff were regarded as knowledgeable, the teaching skills of some were thought to be below their expectation. They said that some lectures were not well organised and there should have been more interaction in class between staff and students, and students themselves. This further proves the statement of Howarth (2003) that “Teaching students of multi-cultural and linguistic diversity is more demanding, due to the much wider range of learning preferences which have to be understood”. Culturally Asian students prefer teacher-centred learning to the student-centred approach adopted in the UK (Russell, 2005). Therefore, they may expect more of the lecturers regarding teaching skills.

With regard to academic content, they emphasised that the scope and depth of knowledge were inadequate. Some staff only provided an overview of the subject area rather than an in-depth knowledge. The application of knowledge in real business context should have been stressed, and case study should have been more effectively used to facilitate the link between theory and practice. Furthermore, they suggested that there should be visits to UK companies and work experience should be part of the course, for example, 3-month placement in industry. However, this is impossible for some students due to visa restrictions and not all students can meet the selection criteria set by companies. On the positive side, all students spoke highly of the team learning experience in Buxton, UK and the international study tour in Prague, Czech Republic.

It was mentioned that the curriculum should be more international, reflecting the needs of international students. For example, how should some management theories and practices be adapted for effective application in developing countries? They also said that student workload including the number of modules and the number of class hours for each module was not adequate. Some students expected the program to be a very busy and intense one. One even said that the course should have made students so busy that they should not have had much time to work outside class. This has certainly gone to an extreme.

As to “Assessment and feedback”, a number of participants did not consider the marking arrangements of exams to be fair and transparent. When students failed the exams or when they appealed that their marks were too low, they were not allowed to view their own exam papers. Additionally, it was stated that the assignment marking criteria of certain modules were not consistent and, in some cases, not high enough. For example, the same way of referencing caused problem in the assignment of one module, but not in that of another. Regarding assignment feedback, they said that very often they could not read the handwriting of staff.

As “Organisation and management” is concerned, it was suggested that student feedback should be gathered during the course of the program instead of at the end of the semester, because they could only benefit from the feedback gathered and acted upon before the course had finished. As to “Academic support”, it was mentioned that occasionally it was difficult to make appointments to see staff, for example, when they were slow to respond to students’ emails. It seems that certain academic conventions need to be further explained. One participant asked: “What’s the point of being so strict with referencing, which is totally useless to a professional manager?” The only issue they raised about “Learning resources” was that there should be more up-to-date books available in the library.

Some of their comments are culturally bound. For example, one Indian student believed that there should be more exams than written assignments. He said that there were many exams at institutions in India, which were more effective means of assessing students’ achievements. This lends support to the notion that different cultures have different service quality needs (Barnes, 2007). Enhanced student
satisfaction depends on identifying such needs and dealing with them properly. Adaptations on both sides are necessary to maximise mutual benefits.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions
This research has provided insights into how teaching and learning, the core service delivery of HE, can be a primary determinant of student satisfaction in HE on the basis of an empirical analysis of a sample of international postgraduate business students of a British university. A two-stage methodology was adopted comprising a quantitative survey and qualitative focus group interviews. Composed of seven service categories, a research framework was developed, which has basically captured the crucial service factors relating to teaching and learning in HE. If adapted accordingly, it can be employed in other HEIs. The IPA framework (Martilla and James, 1977) has been proved to be a very useful technique to measure student satisfaction in HE. Many of its advantages have been confirmed in this study.

Recommendations to the British University
According to Edwards Deming, management is responsible for 85 percent of all quality problems (Fitzsimmons and Fitzsimmons, 2008). The paramount task of the management of the University is to develop a culture of student focus and continuous quality improvement. Co-ordinated organizational policies, structures (Russell, 2005) and mechanisms should be established to cultivate this culture. Meanwhile, leadership should be provided in changing the systems and processes leading to student dissatisfaction (Fitzsimmons and Fitzsimmons, 2008). It is suggested that in addition to a central committee coordinating university wide quality issues, each faculty should have its own department dedicated to quality excellence promotion and student satisfaction enhancement. The following initiatives should be integral parts of the university’s quality improvement mechanisms.

Student Education
Sometimes the dissatisfaction of international students is caused by misunderstanding and lack of knowledge, which can negatively impact on their success and educational outcomes (Ryan, 2008). Consequently, surveys should be conducted at an early stage to understand their expectations, because international students may have a “false preconceived ‘ideal’ image of life and educational standards in the UK” (Barnes, 2007, p 22). Unrealistic expectations and misconceptions should be dealt with and measures taken to “train” them so that they will know how to behave in certain situations. Where possible, such training programs should be started before students come to the UK. An effective induction and support system are absolutely necessary (Adee, 1997).

One focus of student education should be on differences in educational philosophies and academic conventions between HEIs in the UK and their home countries. Topics to be covered may include, for example, the purpose of higher education, the value of independent learning and critical thinking, etc. Emphasis should be placed on not only how things are done here, but also the benefits of doing things this way. As “co-producers” of their own education (Hennig-Thrau et al., 2001), students’ participation in the learning process is essential for their success. Hence, training students as “partial employees” is an effective way to enhance their own satisfaction because they can learn to contribute to the service more significantly (Bowen, 1986).

Student Feedback and Service Recovery
Delivering excellent service does not only mean exceeding expectations. It is also about dealing well with problems and queries (Johnston and Clark, 2005). Convenient communication systems should be in place and incentive introduced to encourage students to report any quality issues to the university. The university should seek to respond promptly to incidents resulting in dissatisfaction by means of effective service recovery approaches. A systematic-response approach can be introduced to offer a consistent and timely response to customer complaints by identifying critical failure points and determining appropriate
recovery criteria in advance (Johnston and Hewa, 1997). Consequently, students’ negative or neutral perception may be changed to a positive perception of the overall service experience (Ford et al., 1999).

Surveys should be undertaken regularly, not just at the end of the semester to monitor the level of student satisfaction with their learning experience and track the improvement made. Therefore, it is more likely for the university to identify and tackle potential quality problems before they actually become critical (Angell et al., 2008). In a way, the student feedback is also used as an early intervention approach to service recovery. It can supplement the systematic-response approach by attempting to intervene and fix service-process problems before they affect the customer (Johnston and Hewa, 1997). Student feedback should also be collected in different forms to gather both quantitative and qualitative data. Additionally, such surveys may be employed as a vehicle of service benchmark to generate other indicators of quality that may contribute to the competitiveness of the university (Rowley, 2003).

**Total Quality Initiative**

Services are delivered to people by people, and the moments of truth are of extreme importance to a university’s image (Banwet and Datta, 2003). All employees of the university should recognise the importance of the quality of every single service encounter or moment of truth experienced by customers, which forms part of their overall impression of the entire service offering (Dale, 2003). In order to deliver total student satisfaction, all staff should adhere to the principles of quality customer service in every aspect of the service delivery (Gold, 2001). Where possible, it may be worthwhile to introduce explicit standards of service to various aspects of the services (Douglas et al., 2006). For example, staff should respond to all student e-mails within a specified timeframe.

**Staff Motivation and Development**

Staff with good performance in evaluation of teaching by students should be rewarded accordingly. For example, a prize and the title of “Lecturer with Excellent Teaching Skills” can be offered to them. Periodic training should be provided to improve the teaching methods of staff and seminars organised to share good teaching practices. Particular emphasis needs to be placed on the effective use of case study to facilitate the connection between theory and practice. Moreover, staff development strategies should be formulated to improve knowledge and practices in cross-cultural teaching and learning (Ryan, 2008). Relevant information and guidance should be identified and disseminated. Research into ways of enhancing teaching and learning for international students should be promoted (Ibid). There is also a necessity to investigate how the curriculum can be internationalized to better meet the needs of overseas students.

**Limitations with the Study**

The limitations of this study should be raised to provide possible directions for future research. First, the sample was only confined to international postgraduate business students within one UK university. Further research is needed to cover a larger sample on a greater variety of courses. Attention also needs to be drawn to the inability of this study to capture the change of students’ perceived service quality over time, which is one of the key differences between higher education and other service sectors (Telford and Masson, 2005). “Education may be unique in the sense that is difficult for the customer to assess the quality and relevance of the service. A University course is unusual in that the buyer, i.e. the student, may have only a general idea of what lies ahead and may not fully comprehend the content or relevance of a course until the later years of study or potentially long after graduation” (Dickson et al., 1995, p. 63).

Additionally, participants in the research came from different countries in Asia and Africa with different culturally bound educational values. By grouping them together, this study may have overlooked the impact of cultural differences on their perceptions towards higher education (Barnes, 2007). Therefore, it is suggested that future research should examine in detail the similarities and differences in service quality perceptions of students on the basis of nationality.
REFERENCES


**OTHER SOURCES**


APPENDIX

The following statements are used in the “Student Satisfaction Questionnaire”:

**The Teaching on My Course**
1. Staff are enthusiastic about what they are teaching.
2. Staff possess adequate subject area expertise.
3. Staff possess adequate teaching skills.
4. Staff are happy to help students with their questions.
5. The academic content of my course is well-designed.
6. Vocational topics (e.g. career planning) are adequately addressed to enhance job prospects.
7. The student workload (including lectures, tutorials and assignments) is appropriate.
8. Class sizes are appropriate – neither too big nor too small.
9. Adequate supporting lecture and tutorial materials are provided.

**Assessment and Feedback**
10. Assessment arrangements and marking are fair and transparent.
11. Assignment feedback is provided within the set timeframe (within 5 working weeks after the end of the assessment week).
12. The assignment feedback is useful.

**Academic Support**
13. Sufficient arrangements are made to clearly explain the university’s academic conventions (e.g. referencing) and expectations of student (e.g. expected amount of independent learning).
14. It is convenient to make appointments with staff (e.g. by email or in person).

**Organization and Management**
15. The course is well organised and running smoothly.
16. Student feedback are gathered and used to improve the quality of teaching.

**Learning Resources**
17. The library resources and services are good enough for my needs.
18. General IT resources and services are good enough for my needs.

**Personal Development**
19. The course has helped me to develop transferable skills (e.g. team working, communication, problem-solving skills).
20. My English language skills have improved.
Bridging the Theory-Application Gap in Undergraduate Management Education

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East Texas Baptist University

Don Daake
Olivet Nazarene University

This empirical study tested the existence of the theory-application gap in undergraduate management education based on professor beliefs about theory and application emphasis as well as reported behaviors on the use of theory and application techniques. Quantitative results confirm the existence of the gap by showing distinct differences in beliefs regarding appropriate emphasis and actual pedagogical techniques used. Qualitative results offer insights regarding the nature of the theory-application gap, as well as creative ways professors are bridging the gap with specially designed assignments and activities in the classroom.

INTRODUCTION

In management education, business schools are doing the work of preparing practitioners. “Ultimately, we need a synthesis of theory and practice if we are to prepare thoughtful practitioners” (Raelin, 2007: 495). Preparing thoughtful practitioners requires moving away from the apparent dichotomy of theory and practice and moving toward the synergistic combination of the two. Thoughtful practice is informed by the complements of theory and practice.

Ideally, theory and practice advance together and are connected by various bridges, such as, education, publications, and consulting. Higher education represents one significant bridge or linking mechanism between theory development and theory use (practice). While a great deal of attention in the literature has been devoted to the seriousness, causes, and potential solutions to the theory-application gap in management studies, most education-related solutions have been addressed at the graduate level.

This study examines what professors believe about the levels of theory and application for undergraduate management education and their behaviors regarding the teaching techniques they use in the classroom. The purpose of this research is two-fold. First, this study tests the existence of the theory-application gap in undergraduate management education based on professor beliefs (about appropriate emphasis on theory and application) and behaviors (as evidenced by the use of theory-oriented and application-oriented techniques). Second, this study explores the reasons for that gap and ways that professors are overcoming in their classrooms. It is hoped that the results of this study will create greater understanding of the theory application gap and foster stronger links between theory development and practice.
LITERATURE REVIEW

Theory and Practice

Management theory is best developed in relationship with management practice. Raelin argues that “by merging theory and practice we will end up with better theory, better practice, and better learning that will prepare us for both”. He continues, “…one of theory’s main purposes is to inform practice…theory loses much of its vitality if uninformed by reflection on practice” (2007: 495). Historically, this could be observed even as, in the early 20th century, a distinction between management practice and management thought began to emerge (Wren, 2004). During this time, management thought took on the separate role of collecting, organizing, testing, refining, and retaining the realities of management practice. Even though management thought became distinct from management practice, the two continued to be closely intertwined, with management practice often driving theory development. Koontz states, “no one could deny that the ultimate test of accuracy of management theory must be practice and management theory and science must be developed from reality” (1961: 184).

However, in more recent years, the gap between theory development and management practice has grown and become a cause for concern (Mintzberg, 2004; Pfeffer & Fong, 2003). This gap has been framed as a knowledge creation or production problem and a knowledge transfer or dissemination problem (Starkey & Madan, 2001; Rynes et al., 2001; Aram & Salipante, 2003; Van de Ven, 2006; Wren et al., 2007). Pettigrew’s (2001) numerous “double hurdles,” including scholarly quality and relevance, focus on the complexity of addressing simultaneously knowledge production and engagement with knowledge users.

Solutions to this gap problem have focused on the circular relationship or linkages between research and practice (Duncan, 1974; Hargadon, 1998; Pettigrew, 2001; Pfeffer & Fong, 2003; Weatherbee, 2008, Burke & Rau, 2010; Hughes et al., 2011). This relationship can be described as a number of players (managers, researchers, professors, and students) who are connected by various other players (higher education, original research, academic journals, trade journals, consulting firms, training and development, graduate education). Solutions with an active, practical focus have been explored, such as, the use of alliances and networks (Osborn & Hagedoorn, 1997), research conducted inside organizations (Rynes et al., 1999), practice-based learning (Raelin, 2007), simulation games with case studies (Rompho, 2011), classroom research (Loyd et al., 2005), developing original business or marketing plans (Bingham & Quigley, 1991), project-based learning (Steger et al., 2011), real-time case studies (Theroux & Kilbane, 2004; Theroux, 2009), case studies and computer simulations (Reid & Anderson, 2012), and the use of teams to integrate science and practice (Offerman & Spiros, 2001). These various techniques represent effort to strengthen the linking mechanisms and relationship of theory generation and dissemination.

This study focuses specifically on the management education link. Academics in management education provide an important bridging role for knowledge creation and dissemination as “knowledge brokers” (Hargadon, 1998; Starkey and Madan, 2001; Wren et al., 2007). Van de Ven and Johnson’s (2006) concept of engaged scholarship suggest that in the management classroom, the professor has the opportunity to connect theory and application in essential ways that help prepare students for more effective work in management.

A look at the relatively brief history of management education in the U.S. shows that the pendulum tends to swing to and from a practice focus and an academic focus (Vermeulen, 2005; Wren et al., 1994). That is, management education has a history of emphasizing rigor at the expense of relevance, or vice-versa. Most recently, many critics of business education, particularly at the professional and graduate level, were of the opinion that the pendulum had swung too far in the direction of rigorous theory, to the neglect of application (Pfeffer & Fong, 2003; Bennis & O’Toole, 2005; Mintzberg, 2004).

This study, however, draws on the work of individuals who brought the discussion to the undergraduate level. Given the sheer quantity of management students (managers-to-be) graduating each year and entering the work force, it is surprising that so few studies have focused exclusively on the undergraduate level. For example, according to the U.S. Department of Education, of the 1,485,000 bachelor’s degrees conferred in 2005-06, the largest numbers of degrees were conferred in the field of
business with 318,000 degrees, of which more than half were management related. For the same time period, a total of 148,000 business degrees were conferred for Master’s and Doctor’s degrees combined (Digest of Education Statistics, 2007). Overall, the bulk of management education is at the introductory or undergraduate levels (Weatherbee, 2008). These statistics provide compelling evidence of a need for this study. It is encouraging to see some promote the idea that professors do make a significant impact on undergraduates (Carter, 2008) and that the undergraduate classroom is one of the most important forums for disseminating research results (Andrew & Frost, 1997). It is assumed, or at least hoped, that the results of rigorous research would find its way into the classroom and eventually into the minds of practitioners, via graduates in the workplace.

Hypotheses

Though much attention in the literature has been on graduate level business education, the longitudinal work of Wren et al. (1980, 1994, 2007) highlights undergraduate management education. The authors assessed Academy of Management member professors’ attitudes towards the balance of theory and application in undergraduate business management education and found a distinct trend towards more application in 1989 compared to 1977. But the 2005 study indicated a shift back towards theory, supporting the view that management education is more focused on theory than application. Interestingly, from 1989 to 2005, the findings also revealed an increased use of pedagogical techniques that are more application-oriented. The authors noted the “intriguing paradox of the simultaneous trends of increasing emphasis on theory and application-oriented techniques used” (Wren et al, 2007: 488).

While the literature and conventional wisdom show a distinctly perceived theory-application gap, the Wren et al. (1980, 1994, 2007) results suggest the hopeful possibility of high theory and high application. This intriguing paradox provides the inspiration and impetus for this study. Indeed, personal communication (2006, 2008) with Dr. Daniel Wren provided specific support and encouragement for continuing this line of research and inquiry.

Based on the preceding literature review, four hypotheses emerged for this study. The first hypothesis compares professor beliefs (propositions held, but not necessarily acted upon as behaviors) about appropriate levels of emphasis on theory and levels of emphasis on application. Consistent with Wren’s study, five common undergraduate management courses (principles of management, organizational behavior, human resource management, production/operations management, and business strategy) were selected for this study.

Hypothesis 1: For each undergraduate management course, there is no statistically significant difference between professor theory emphasis and application emphasis.

In the studies by Wren and his colleagues (1980, 1994, 2007), researchers found an increase in the use of application-oriented techniques as defined by the researchers. The researchers provided a list of commonly used application-oriented pedagogical techniques, and their analysis captured the relative change over time of respondent’s use of those application-oriented techniques. This study used the same list of pedagogical techniques which includes lecture on basic concepts, student research projects, print/electronic media, off-campus assignments, professor experience, computer simulations, experiential exercises, guest speakers, case studies, and student work experience. However, in contrast to the prior studies, this study asked respondents first to categorize the list of pedagogical techniques as either theory-oriented or application-oriented. Then respondents were asked to indicate how frequently they used those techniques. While the prior studies focused on the relative increase or decrease (over time) in the use of only application-oriented techniques, this study sought to compare the reported use of theory-oriented and application-oriented techniques. The second hypothesis seeks to discover frequency of theory-oriented techniques vs. application-oriented techniques. It is focused on professor behaviors (actual use of techniques) rather than beliefs about appropriate emphasis. The same five management courses were tested.
Hypothesis 2: For each undergraduate management course, there is no statistically significant difference between professor usage of theory techniques and usage of application techniques.

The third and fourth hypotheses relate to the possible connection between professor beliefs about emphasis and professor use (behavior) of particular pedagogical techniques. This study explores the possible existence of a connection between belief (emphasis on theory or emphasis) and behaviors (the use of theory-oriented or application-oriented techniques). One would expect (hope) that professor behaviors would reflect professor beliefs. The relationships between professor beliefs about theory emphasis and theory pedagogical techniques usage were examined for the five management courses in Hypothesis 3. Likewise, application emphasis and application pedagogical techniques usage were examined according to Hypothesis 4.

Hypothesis 3: For each undergraduate management course, there is no statistically significant difference between professor theory emphasis and theory-oriented pedagogical techniques used.

Hypothesis 4: For each undergraduate management course, there is no statistically significant difference between professor application emphasis and application-oriented pedagogical techniques used.

METHODOLOGY

This research was a mixed-methods study using primary data from an online survey and follow-up one-on-one interviews with professors who teach undergraduate management courses.

The population for this study was professors teaching undergraduate management courses in schools in the Council of Independent Colleges (CIC). As a group, the CIC schools that attend to teaching, that represent a range of accreditations, and that hold a diverse range of mission. Professors who regularly teach undergraduate management courses were invited to participate in an online survey. Participation was completely voluntary and anonymous. A total of 239 responses were collected, representing a 22% response rate. Among the respondents, 61% had earned PhD degrees, 13% had DBA degrees, 13% had MBA degrees, and 13% had other degrees (EdD, JD, etc.). Sixty percent of the respondents were male and 40% were female. More in-depth information was gathered from nine individuals who, after completing the online survey, expressed interest in the study and agreed to participate in the interview phase. The interview questionnaire was developed with open-ended questions regarding the theory-application gap and results from the online survey.

Online Survey Method and Instrument

The online survey consisted of nine questions, plus demographic information. The first two questions asked for professor beliefs regarding the appropriate level of theory emphasis and the appropriate level of application emphasis in commonly offered undergraduate management courses, including, Principles of Management (PM), Organizational Behavior (OB), Human Resources Management (HR), Production/Operations Management (PO), and Strategic Management (SM). This study classified pedagogical techniques as theory-oriented or application-oriented, based on professor responses to question #3 which asked professors to rate pedagogical techniques with 1 being “very theory focused” and 7 being “very application focused.” To determine professor behavior using those pedagogical techniques, questions #4-8 asked participants to report how frequently they used the techniques in each of the management courses listed. The remainder of the survey collected data on the professor (questions #9-19), the degree program (questions #20-22), and the institution (questions #23-25).
**Interview Method and Instrument**

After submitting their online surveys, nine individuals volunteered to participate in the follow-up interviews. Thus, the interviewees were a convenience sample drawn from individuals who had completed the online survey. Interviewees were sent a copy of the original online survey and results from that survey. They were given a short list of interview questions to expect during the telephone interview.

Participants were interviewed, by phone, using the following general format: (1) personal introductions; (2) introduction to the study and reminder of the online survey; (3) interviewees’ initial comments on the theory-application gap; (4) discussion of the survey results (specifically relating to hypotheses 1-4) using tabular results and graphs; (5) interviewees’ concerns about constraints; (6) interviewees’ practical solutions; (7) interviewees’ final comments on the role of undergraduate management education in bridging the theory/application gap.

Unlike the anonymity of the online survey, the interviews were conducted on a personal level. Basic introductions revealed that the 4 men and 5 women ranged in age from the upper-twenties to late-fifties. All of them had previous business experience from a variety of industries. They all held doctorates or were ABD. The interviewees represented nine different CIC schools with varying historical roots and some with religious affiliations. All nine of the universities represented are regionally accredited, and two are AACSB accredited. The individuals specifically expressed personal and institutional commitments to hands-on learning, service learning, academic rigor, personal attention, social justice, diversity, study abroad, and religious service. All of them expressed a keen interest in the effective teaching of undergraduate management courses.

**RESULTS**

**Survey Results**

The results for hypotheses 1-4 were tested using paired samples t-tests comparing the differences in the means of two variables for each of the five management courses, including Principles of Management (PM), Organizational Behavior (OB), Human Resources Management (HR), Production/Operations Management (PO), and Strategic Management (SM). Paired sample t-test results are reported as significant at the .05 level.

Hypothesis 1 tested the difference between professor beliefs regarding the appropriate emphasis on theory (ThEmp) and the appropriate emphasis on application (AppEmp). The results show that management professors sampled believe in a greater emphasis on application than on theory in all five courses. Based on the paired samples t-test, the variable means are different to a significant level for Principles of Management and to a highly significant level for Human Resources Management, Production Operations Management, and Strategic Management. For Organizational Behavior, there is not a significant difference. Hypothesis 1 is rejected for four of the courses (PM, HR, PO, and SM), but it is not rejected for OB. The differences in means for each course are illustrated graphically in the following figure.
Hypothesis 2 tested the difference between the frequency of use of theory-oriented (THTECHUSED) and application-oriented (APPTECHUSED) pedagogical techniques in each of the five courses. Prior to reporting their use of the pedagogical techniques, professors classified each technique as either a theory-oriented technique or an application-oriented technique. Respondents were asked to rate each of the ten pedagogical techniques on a scale from 1 -7 with 1 being “very theory focused” and 7 being “very application focused.” Based on the means and factor analysis, the results showed a natural break into two categories. Theory-oriented techniques included lecture on basic concepts, the use of student research projects, print/electronic media, off-campus assignments, and professor experience. Application-oriented techniques included the use of computer simulations, experiential exercises, guest speakers, case studies, and student work experience. Regarding Hypothesis 2, professors report using theory techniques more frequently than application techniques for all five courses. Based on the paired samples t-test, the variable means are significantly different for all five courses, and Hypothesis 2 is rejected for all five of the courses (PM, OB, HR, PO, and SM). The differences in means for each course are illustrated graphically in the following figure.
Hypothesis 3 tested the difference between professor beliefs about the appropriate emphasis on theory (ThEmp) and the frequency with which they use the five theory techniques (THTECHUSED) in each of the five courses. Based on the paired sample t-test, the variable means are different at a significant level for the Organizational Behavior course and at a highly significant level for the Human Resources Management course. For Principles of Management, Production Operations Management, and Strategic Management, there is not a significant difference in the means of theory emphasis and theory techniques used. Hypothesis 3 is rejected for OB and HR and is not rejected for the PM, PO, and SM. The differences in means for each course are illustrated graphically in the following figure.
Hypothesis 4 tested the difference between professor beliefs about the appropriate emphasis on application (AppEmp) and the frequency with which they use the five application techniques (APPTECHUSED) in each of the five courses. Based on the paired samples t-test, the variable means are significantly different for all five courses and Hypothesis 4 is rejected for all five courses (PM, OB, HR, PO, and SM). The differences in means for each course are illustrated graphically in the following figure.
Summary of Survey Results

The survey results, detailed in Appendix 1, show that a gap does exist between professors’ beliefs about the appropriate emphasis on theory and application and professors’ behavior in using the pedagogical techniques. Even though professors indicated the belief that applications should be emphasized more than theory (Hyp 1), theory-oriented techniques reportedly are used more frequently than the application-oriented techniques in all five courses tested (Hyp 2). Furthermore, professors’ belief in the appropriate level of emphasis on application is higher than their actual use of application-oriented techniques (Hyp 4).

Interview Results

Following the survey, one-on-one interviews were arranged to discuss the results from the survey. The interviewees concurred that the theory-application gap exists, that it is a problem in undergraduate management studies, and that it matters. Even so, those interviewed expressed a clear conviction that the gap can and should be overcome.

Following initial comments, professors were asked to discuss the results from the hypotheses testing. No one expressed surprise at the results of Hypothesis 1 which showed professors to believe in a greater emphasis on application than theory in all courses. Hypothesis 2 generated some discussion regarding the pedagogical technique classifications; however, few comments emerged regarding the results from Hypothesis 2. Theory-oriented techniques are simply more commonly used than application techniques. Hypothesis 3 did not generate much discussion, probably because it is predictable that there would be little gap between belief about appropriate theory emphasis and behaviors in using theory techniques. However, Hypothesis 4 generated a number of responses, such as, “WOW!” and “Yes, big difference!”
In response to the graph for Hypothesis 4, one interviewee stated, “Here is the crux of the study - intentions versus actions.”

Though respondents were unanimous in their conviction that a serious theory-application gap exists, they framed it in various ways. Three primary themes emerged during the interviews which shed light on the interviewees’ perspective of the theory-application gap. The first theme is one of perspectives or viewpoints. From the interviews, three specific, sometimes competing, perspectives emerged: the student perspective, the professor perspective, and the potential employer perspective. Even though professors were reporting on their beliefs and behaviors in the classroom, they recognize that students and future employers have a different perspective and likely different goals for the undergraduate experience. The second theme was one of knowing it. That is, how does one know or learn theory and how does one know or learn to apply it? On the one hand, “pure theory cannot be digested” (by undergraduates) and “real application - real decision making in a real company - is not allowed.” As one interviewee stated (and others concurred), “one cannot fully understand theory until one has applied it.” Making explicit connections between theory and application for the students, pressing students to recall fundamentals learned in previous courses, and moving students to tacit understanding through application were consistent themes in the interviews. The third theme was one of preparedness. Professors interviewed were unanimous in their concern for preparing students for life beyond college, particularly the work lives of graduates. One interviewee stated, “A prepared student is one who is confidently ready to meet the expectations of employers.”

In addition to commenting on the theory-application gap, interviewees were asked to identify constraints and possible solutions. All of them indicated early in the interview that they believe a serious gap exists, and their answers reflect personal, institutional and cultural constraints. By far, the most common constraint identified was “time.” Like most working professionals, professors have to prioritize and “spend time on what they are evaluated on.” Additional comments include the fact that there are not really very many “authentic practice opportunities.” After all, who will trust 20-21 year olds with significant business decisions? Other constraints fell generally into a category of “fear and control,” suggesting that it is a little frightening to place undergraduates in a ‘real situation’ where the professor cannot control the process or outcomes. University systems and resources apparently support greater use of theory-techniques, which are seen as more accessible, familiar, and less time consuming. Application techniques require more effort and time to design, use, and grade, and the extra work does not immediately appear worth it due to institutional requirements and reward systems.

In spite of those constraints, professors described specific methodologies they employ to bridge the theory-application gap. Their list includes meta-assignments (combining several pedagogical techniques), service learning, project based assignments, field experience learning (international), case studies with one page analysis, simulations, internships, real client consulting (business plans, interview/selection processes, marketing plans, web-site development, recommendations to management), internships for undergraduates in companies with graduate students, and progressive, current events projects that last the entire semester. Toward the end of the interview, professors were asked, “Does undergraduate management education play a role in bridging the theory-application gap, and how well are we as educators fulfilling that role?” Interviewees responded to this question in the affirmative but with some varied perspective. Yes, there is a role. And, yes, we are gradually getting better at it (connecting theory and application, preparing students, etc), particularly as we persist with those mega-assignments which target theory and application.

Finally, interviewees were asked to respond to this question, “Rather than a forced choice between theory and application, do you think it is possible to be “high” on both theory and application?” Those most convinced that “high theory/high application” is desirable and conceivable enthusiastically reiterated their favored means for accomplishing it. Apparently they believe it can and should be done. The collective wisdom of the respondents suggests that theory alone is worth very little (even worthless) and that application alone is just a collection of stories which are easily forgotten and are, in fact, never applied.
DISCUSSION

At least three significant findings emerge from this study. First, the results from the survey and the interviews indicate that professors believe both theory and application should be emphasized at the undergraduate level, with greater emphasis on application (hypothesis 1). This is a significant, stand-alone finding relating to the theory-application gap. The belief that both theory and application should be emphasized, demonstrates potential for the “high-high” scenario of emphasizing both simultaneously. Second, however, the survey results (hypotheses 2 and 4) show a greater use of theory techniques (compared to theory techniques) and a higher belief in application emphasis (compared to the use of application techniques). This is troubling, but not surprising, given the nature of the theory-application gap and the constraints explained through the interviews. Third, the majority of those interviewed described their strong belief in holistic management education as well as their efforts to use both application and theory techniques. Interviewees shared specific classroom assignments they use to draw together theory and application. From the interviews, one gets a hopeful glimpse of the potential “high-high” combination of theory and application. Taken together, the survey results and interview results simultaneously confirm the existence of the theory-application gap and methods for overcoming it. The results of this study explain, in part, the Wren et al. (2007) paradox of higher theory emphasis and increasing use of application techniques, but only when the professor is deliberate and intentional in creating assignments that develop both.

IMPLICATIONS

The results of this study have practical and methodological implications. Practically, this study suggests that the “solution” to the theory-application gap is an increased use of highly integrative exercises and assignments, which apparently is a priority for professors in this sample. Professors need to take the time to design, utilize, and grade more complex assignments that integrate theory and practice. Additionally, professors can find ways to declare explicitly to their undergraduate students that theory and application are complementary and not mutually exclusive. Deans and other administrators need to provide support for exploring alternative style assignments and activities. Departments, schools, and institutions need to continue to increase the available opportunities for students to gain hands-on experience with internships, international study assignments, and service learning projects. Curriculum refinements such as these can potentially affect students who, in turn, will graduate and impact the workforce. It is hoped that management education impacts management practice in a positive way. It follows that a stronger link between theory and application in management education can strengthen the link between theory and application in practice. Thus, on a practical level, the results of this study could influence professors, deans, administrators, institutions, students, and potential employers.

Methodologically, this study makes a contribution by using both quantitative and qualitative methodologies. The quantitative results from the survey give an objective view and give statistical supporting evidence of the theory-application gap. The qualitative results from the interviews offer explanations as to why professors behave as they do and how they might be able to overcome the gap. Overall, using a combination of quantitative and qualitative methodologies in one study generates a more complete picture of these complex topics than either methodology can provide alone.

LIMITATIONS AND FURTHER STUDY

At least three limitations in this study should be noted. First, this study is limited to professors at member schools in the Council of Independent Colleges (CIC) and therefore the results cannot be compared directly to prior studies of Wren et al. (1980, 1994, and 2007). Second, while prior studies (most notably the AACSB study in 1988) may have had a research bias in the sample, this population sample may contain a teaching bias. The CIC schools are distinctly independent from state support, and the lack of federal funds for research would impact the research emphasis at these schools. Third, there
are likely other independent and/or intervening variables, such as class size, which affect on what can or cannot be accomplished in the classroom.

Based on the results of this study, many options and opportunities exist for further research. The three themes (perspectives, knowing it, and preparedness) highlighted in the interview responses provide appropriate directions for future study. While this study focuses on the professor viewpoint, further study could compare professor, student, and employer perspectives on theory and application. Second, further study regarding the employers’ view could also promote understanding of preparedness for students as they graduate and enter the workforce. Third, the theme of “knowing it” could be studied further particularly in conjunction with explicit and tacit knowledge literature. Additionally, a number of various correlations and causal relationships could be explored. For example, the individual demographics, institutional factors, and other situational variables (class size, changing educational environment, etc.) could be explored to see what affects the theory-application balance.

CONCLUSION

According to its purpose, this research highlights significant theory-application relationships which exist at the level of undergraduate management education. As stated in the introduction to this study, business schools are doing the work of preparing practitioners. Preparing thoughtful practitioners requires moving away from the apparent dichotomy of theory and practice and moving toward the synergistic combination of the two.

This mixed-methods research produced quantitative results showing a distinct gap between theory and application emphasis, between theory techniques used and application techniques used, and between application emphasis and application techniques used. The qualitative interview phase of this research produced several valuable insights regarding the nature of the theory-application gap in undergraduate management education, the constraints that tend to prevent bridging the gap, and the various creative ways professors are bridging the gap between theory and application in their classrooms. Collectively, the quantitative and qualitative results answered many of the “what”, “why”, and “how” questions of theory and application.

The results of this study suggest that being “high” on both theory and application at the undergraduate level is possible and necessary (though not necessarily prevalent in practice) for preparing students for their work life in business management.

REFERENCES


### SUMMARY OF RESULTS

#### HYPOTHESIS 1-4: CORRELATIONS & PAIRED SAMPLES T-TESTS

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*** Correlation is significant at the 0.001 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Compliance Costs of Individual Income Taxation: 
Some Empirical Evidence from Portugal

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The purpose of this paper is to evaluate the compliance costs of Personal Income Tax in Portugal as well as its main determinants. In 2007, a survey of 350 individual taxpayers was carried out in Portugal to evaluate compliance costs for the fiscal year of 2006. This paper presents the results of that survey, as well as the main determinants of compliance costs in Portugal. The results show that compliance costs of personal income taxation are related to the number of dependents, the level of taxpayers’ education, the economic activity (wage earners or self employed) and income levels.

INTRODUCTION

The purpose of this paper is to present empirical evidence on the importance of compliance costs related to the individual income tax for Portuguese taxpayers.

Based on a random sample of 308 surveyed taxpayers, we analyze, firstly, the amount of compliance costs borne by two types of individuals: taxpayers that deal with their tax obligations without professional assistance, and taxpayers that use professional help. The compliance costs include their valuation of the time spent dealing with tax obligations and also of other monetary expenses, such as those on software, mail and technical books.

Secondly, we analyze the main determinants of compliance costs of Portuguese individual taxpayers. Therefore, we test several hypotheses concerning the influence of taxpayers’ characteristics on the compliance costs they face. In particular, we test whether personal characteristics (measured by variables such as age, school level, marital status, number of dependents), economic factors (type of activity, income level, income sources), technical factors (level of knowledge of tax laws) and psychological factors (willingness to comply, perception of the tax system’s fairness) have any influence on compliance costs. From the set of results of the empirical analysis some conclusions can be drawn. Thus, a higher number of dependents and higher school levels are associated with higher compliance costs; wage earners face lower costs than self employed individuals; higher income levels induce higher compliance costs; taxpayers do incur in psychological costs caused by anxiety and stress and, as far as these are concerned, elderly and less educated taxpayers have higher psychological costs.
The major objective of the research here was to evaluate compliance costs for personal income tax in Portugal and discover whether the conclusions from prior research could be replicated for Portugal. The paper is organized as follows: section 2 presents a brief review of literature; section 3 introduces the methodology used to evaluate compliance costs in Portugal; section 4 calculates Portuguese compliance costs; section 5 analyses the results of the research and section 6 concludes.

LITERATURE REVIEW

In the tax literature, issues such as the vertical and horizontal equity levels of fiscal systems or the degree of economic efficiency attained by different tax choices have been, for a long time, well documented. Another dimension of the tax system – the compliance costs it imposes on taxpayers – was, for a long time, a secondary topic. It was believed that equity and efficiency levels were the overwhelmingly relevant features in tax policy. However, the costs of compliance associated with the tax system have, in recent decades, increasingly attracted the attention of researchers and policy makers (Shaw et al., 2010).

The growing complexity of the tax system is the most commonly mentioned factor affecting tax compliance and compliance costs (Slemrod, 2007). Slemrod and Bakija (2004) argue that a monetary estimate of the time spent in complying with personal income taxes, in 2003, by American taxpayers is $50 billion. Adding $10 billion spent on personal assistance and other expenses, raises the total amount to $60 billion. Clearly, these are very significant costs imposed by the tax system on the individuals that have to comply with its rules.

According to Sandford (1973; 1989; 1994; 1995; 2000), compliance costs are divided into three groups of costs: time costs; other monetary costs; and the psychological costs. For individual taxpayers, time costs include the time taken to complete tax returns and collected and prepare the necessary tax data. The monetary costs include payments to a tax adviser or tax professional and other costs such as transport to visit the tax adviser or the tax office. Finally, the psychological are those costs, such as anxiety, stress and emotional costs, which taxpayers or advisors experience when dealing with the tax legislation. Tran-Bran et al (2000) distinguished between social compliance costs (SCC), or the costs to the economy, and taxpayer compliance costs (TCC) - the aggregate compliance costs to individual taxpayers. Social compliance costs are sometimes referred to as gross compliance costs, and represent the level of compliance costs in the economy before certain offsets are taken into account, such as cash flow benefits and tax deductibility of various costs. In this paper our attention is more narrowly focused only on the costs directly borne by the taxpayers and only on measurable components of costs such as time and pecuniary expenditures. Furthermore, we do not distinguish between discretionary costs, which are incurred by taxpayers in an attempt to reduce their tax liability and non discretionary costs, which must be spent in order to satisfy the legal filing requirements. What portion of cost is non discretionary is in practice difficult to determine and, in any event, both kinds of costs are real resources costs of collecting taxes. (Walpole et al, 1999)

Given its economic relevance, the measurement of compliance costs has been a topic for tax research in several countries in the last decades of the past century, as noted by Evans (2003). Most studies are based on large scale surveys, using samples of taxpayers and mail surveys. In some cases, interviews were also used to obtain or confirm data.

For the US, Slemrod and Sorum (1984) and Blumenthal and Slemrod (1992) analyzed the compliance costs faced by individual taxpayers. These studies revealed that 21.7 hours and 27.4 hours are the mean time spent by surveyed taxpayers. Authors presenting evidence of compliance costs for other countries concluded that the time spent dealing with record keeping and preparing tax returns is the most significant component of compliance costs, followed by expenses with “personal assistance” and “occasional expenses”.

In Australia, Pope (1993) found out that the mean time spent by individual taxpayers was 7.8 hours, and that the ranking of different compliance costs was similar to the one reported by the above mentioned American studies.
Sandford et al (1989), based on a large scale survey, intended to estimate the compliance costs of individual taxpayers in the UK. A close cooperation with the tax administration was also a feature of this study. The results show that the mean time spent was 3.6 hours. In this study, the personal assistance expenses were higher, in terms of its share of total compliance costs, than in the US or Australia, as noted by Sandford (1994).

Given the discrepancies in the amount of time spent in each country by the average taxpayer, Sanford (ed.) (1995) notes that the international comparison of the compliance costs of individual taxation, per se, is not very useful, since countries differ in the design of taxes and compliance mechanisms, surveys are conducted in different time periods, the concept of compliance costs is not always coincident and the quality of data is not uniform, because of sampling and survey specific characteristics. The international comparisons should be done carefully and are mostly relevant to analyze trends or identify factors that can explain differences between countries (Sandford (1995) and Sandford (2000)).

In the Netherlands, Allers (1994) found out that individual taxpayers spent 4.5 hours complying with the personal income tax.

In Spain, Diaz and Delgado (1995) discarded the mail survey (based on an expected low rate of participation) and used interviews to obtain data. They report 6.8 hours as the mean time spent by the Spanish individual taxpayer to comply with the tax system.

In transition countries some empirical evidence has been found out as well, which highlighted the importance of individual compliance costs in tax policy. For example, Klun (2004), in Slovenia, estimated that taxpayers spent 1,73 hours, on average, family members spent 0,45 hours and friends spent 0,18 hours helping with tax returns. Thus, in total, 2,36 hours were spent on average.

The difficulties in estimating the compliance costs of individual taxpayers are not limited to the complexities (sampling, type of survey, or response rate) in the process of obtaining data. The conversion of the time spent by taxpayers in monetary units is also a major issue in this research field.

When taxpayers hire professional help to comply with their tax duties, no major questions arise. The amount charged by tax professionals is the expense paid by the taxpayer to the professional assistant. However, when the taxpayer spends his/her time to comply with tax obligations; the valuation of it is not an easy matter. If time spent on tax compliance is traded off with leisure activities, the valuation can be complex, and is usually done by several methods: the taxpayer own estimate; the net rate of remuneration based on taxpayer level of income and tax status; the gross rate of remuneration; the maximum that a taxpayer would pay to avoid tax compliance activities.

Following the above studies, Evans (2003) noted that they also measured the influence on compliance costs of variables such as income, number of income sources and taxpayers’ attitude to the fiscal system. These studies drew similar conclusions: compliance costs are relatively high, especially for major taxes, they are also higher than administrative costs; they amount to as much as 10 per cent of the tax revenue; compliance costs are regressive and therefore create some undesirable distributive effects; high compliance costs diminish voluntary compliance; and compliance costs can cause excess tax burden.

Regarding the psychological costs, there is no generally agreed definition in the tax literature, and to our knowledge no one has yet succeeded in measuring them.

Diaz e Delgado (1995) interviewed Spanish taxpayers when investigating compliance costs of Spanish personal income tax and included four attitude indicators: how they perceived the time dedicated to this task; what part of the fiscal obligation was most disliked; their state of mind when the process was completed; and the conversational time occupied by the topic of filing tax returns.

More recently, Woellner et al (2001; 2007) state that psychological costs are manifested in the behaviour of the person required to apply the tax law. They can be observed by behaviour such as fidgeting, tapping, hair chewing and so on. Woellner et al (2001) chose to videotape the reactions of selected groups of taxpayers in Australia. University students were used in a pilot group in which four of them had studied “taxation” and four others had never studied tax. Woellner et al (2001) distributed to the focus group of analyze practical case studies at three levels of difficulty. The authors decided to pursue the original intention of obtaining assistance from a psychologist as how best to analyze the videotapes
for signs of psychological costs. As a result, some but not all participants exhibited psychological costs, either verbally or in their body language such as biting lips and wringing hands.

In this paper, we also propose to develop a new methodology to enable to measure psychological costs of taxation.

To sum up, what emerges from the literature review, as noted by Evans (2003), is a growing sensitiveness of taxpayers and policy makers to the costs imposed by complying with tax systems. Simplification efforts have been conducted in several countries aiming at reducing this burden for individuals and businesses. Therefore, quantifying compliance costs has an important role in the process.

**METHODOLOGY**

The purpose of this paper is to present an evaluation of compliance costs incurred by individuals subject to the personal income tax in Portugal. We evaluated compliance costs for the year 2006 using a survey applied in 2007. The reasons for evaluating compliance costs for personal income tax only were as follows.

Firstly, the Personal income tax represents one of the major sources of tax revenue in Portugal, alongside VAT and social security contributions. Actually, according to the Portuguese Tax Data Base, the main source of revenue is the VAT, with 40% of Gross Domestic Product (GDP), followed by the Social Contributions, with 27% of GDP, and the Personal Income Tax, with 17.6% of GDP.

Secondly, most of the active population is potential personal income taxpayers.

Lastly, but not the least, the major international research on compliance costs has also covered personal income tax. (Wicks, 1965; Wicks, 1966; Sandford, 1973; Slemrod and Sorum, 1984; Vaillancourt, 1989; Sandford *et al*, 1989; Blumenthal and Slemrod 1992; Pope, 1993; Allers, 1994; Malmer, 1995; Chattopadhyay and Das-Gupta, 2002; and Klun, 2004).

The survey included questions about the time spent preparing information and filling in tax forms, consultancy costs and other expenses. It was similar to prior research instruments (Sandford, 1989; Blumenthal and Slemrod, 1992; Klun, 2004), despite the fact that international comparisons of compliance costs could not be made because of several obstacles, such as different methodologies, different response rates, evaluation of time, assessment of tax and tax rates (Sandford, 1995).

Before the survey was conducted, the questions were piloted on some taxpayers in the District of Coimbra with a view to improving the questionnaire. The main purpose of piloting was to make the survey more understandable and easier to answer.

Determining the sample of personal income taxpayers caused some problems, since the tax register is not publicly available, and the current study was not formally supported by the tax administration. In fact, tax administrations withheld their support in almost all the countries in which the earliest research projects into compliance costs were carried out. Without support of the Portuguese tax administration, it was very difficult to carry out the research, but in our opinion, taxpayers were in favor of the research in the pilot study. Therefore, and given the circumstances, data was collected in the Coimbra district, and 350 taxpayers were interviewed face to face, in order to improve the response rate. The interviews were conducted between March and April 2006, when most taxpayers are obligated to fill in their tax forms.

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We believe that think taxpayers from the district of Coimbra, in Portugal, are no different from taxpayers from other regions of Portugal, since the tax system and their obligations of tax compliance do not differ according to Portuguese regions. However, in some developed tax systems the fiscal system differs from region to region, such as in the USA or in Brazil, and then the tax compliance obligations may differ according to the region or state where the taxpayer is registered (Bertolucci, 2003).

Once the sample of our research is justified, forty-two questionnaires were excluded because the taxpayers refused to be interviewed. Thus, the evaluation of compliance costs was made on the basis of 308 responses.

The respondents presented the following characteristics: 162 were male; 221 were married; 119 did not have any dependents; 88 taxpayers did not have any help filling in the tax form and 78 had professional consultancy; 173 were employed; 87 were self employed and 48 did not have a job.
(unemployed, retired or housewives); 184 had only one source of income (category); 93 had two and 31 had more than two. Only 46 per cent of tax-fillers declared themselves to be competent in completing the income tax declaration, while the majority (54 per cent) required some kind of outside help to be able to complete it.

The questionnaire sought qualitative and quantitative information on demographic, legal, economic and tax characteristics of respondents. Firstly, it asks about some personal information, in particular, the respondent’s gender, age, level of education, income, and employment status. The purpose of the survey is devoted to collecting information about the household’s cost of filling in tax returns. Then, the last question of this section asks how the taxpayer fills in the tax form (properly, with unpaid help - family and friends - or with paid help - professional assistance).

Then, for taxpayers without professional assistance, in section 2, we ask how many hours were spent during the year. We divide the hours into various categories with different values in order to calculate compliance costs. In addition, any money spent on tax affairs or otherwise spent in filling in the tax form is solicited, such as on postage and on the Internet. Section 3 is dedicated to the evaluation of the compliance costs of taxpayers with professional assistance. We ask how much taxpayers were paying for the tax professional to help them with the tax form. Finally, some questions on the individual’s attitude before the filling in of the form were included, such as a question designed to elicit the level of stress or anxiety (Likert scale) incurred by taxpayers while managing their tax affairs. In this case our goal is to find one way of measuring the psychological costs incurred by taxpayers when dealing with their tax affairs.

EVALUATION OF PERSONAL COMPLIANCE COSTS IN THE PORTUGUESE TAX SYSTEM

Compliance costs were evaluated separately for two groups of personal income taxpayers: taxpayers without professional assistance (mostly wage earners) and the taxpayers with professional consultancy (mostly self-employers).

In our study, only 46 per cent of tax-fillers (140) declared themselves to be self-sufficient regarding the completion of the income tax form, while the majority (54 per cent) required some kind of outside help (unpaid help or paid help) to be able to complete it. From the taxpayers requiring professional help 29 per cent (90) obtained it for free, whether through personal services provided by their relatives or through friends or colleagues. Only 25 per cent (78) of tax-fillers do indeed pay for the advice and assistance they receive from tax advisers or consultants.

For the first group of taxpayers, without professional assistance, the estimated compliance costs include the cost of time spent filling in a tax form properly and other expenses such as forms, postage, software, copying and so on. Evaluating time spent on filling in tax forms depends on how “time spent” is determined. As we stated above, it could be calculated in relation to spare time, work time or overtime at work. Thus, net wage, gross wage and other values can be used in calculating the cost of that time.

Almost all researchers have used the values stated by taxpayers in their questionnaires, but with slight changes: Sandford et al (1989) used stated values and checked their reliability with the average income earned by respondents; Diaz and Delgado (1995) used stated values corrected by income source; Pope (1995) used stated values but the extreme high or low values were removed; Allers (1994) made two calculations, one with stated values and the other using GDP to value an hour; net wage was used by Slemrod and Sorum (1984), Blumenthal and Slemrod (1992), Malmer (1995), Tran-Bam et al (2000); and gross wage was used by Vaillancourt (1989) as well as Klun (2004).

Time spent by taxpayers, taxpayers’ friends and families was calculated in our research based on the values which the taxpayers stated in their questionnaires during the interviews. We checked the reliability and the internal consistency of the respondents’ answers with the question of the income group.

Thus, for the taxpayers without professional assistance, respondents spent, on average, 3.79 hours (minimum of 1.5 and a maximum of 8.25 hours) filling in the tax return, as we can see in the table 1.
Table 1 details the relationship between the hours spent by taxpayers and income. The allocation of time spent in the different categories is relatively constant among income groups. However, the largest amount of time is spent by the lowest income group. This is not the result of one respondent claiming an implausibly high value of time spent, but rather several high answers.

As we can observe from the table 1, taxpayers devoted, on average, more time to record-keeping (2.33 hours), followed by the process of filling in and sending the tax return to the Inland Revenue (0.97 hours). Tax law research and record-keeping are more important for both the highest and lowest income groups.

Relating the time spent with the process of compliance to the individual income, we found an average value of 74.8 Euro (minimum of 7.5 Euro and a maximum of 450 Euro) spent by 230 individuals without professional assistance.

The study of expenses such as postage, telephone, photocopying, among others, represents one of the most difficult and neglected areas of tax compliance costs research. In our study, an attempt was made to collect data on tax related incidental costs for personal taxpayers. However, it was felt that it was too difficult, for personal taxpayers, to disentangle costs relating to tax compliance. Consequently, we have calculated a minimum incidental average cost, which included the minimum expenses on postage, Internet, telephone and books, among others. After that, we have imputed this incidental minimum average cost (6.49 Euro) to all personal taxpayers. This issue requires further consideration in future empirical studies.

Looking at table 2, the obvious conclusion is that the time spent by taxpayers without professional assistance in tax affairs was the main component of personal compliance costs in Portugal. Disaggregating the data by income, the highest time related cost averages were recorded by the highest income classes, although there was a somewhat U-shaped pattern, with more time being spent by taxpayers at the lowest income classes than in the middle.

Those taxpayers who received paid assistance (78 individuals) were asked about the kind of professional source of assistance and its costs. We realized that there were two types of professional assistance: occasional and regular assistance. In the first group, we included the taxpayers that found the process of filling in the tax form hardly complex, and so they needed occasional professional help to fill
in their tax form. In the second group, we considered the taxpayers that needed regular professional help because of legal accounting and tax obligations.

**TABLE 2**

<table>
<thead>
<tr>
<th>Taxpayers without professional assistance</th>
<th>Annual income groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;4351</td>
</tr>
<tr>
<td>Time</td>
<td>51,29</td>
</tr>
<tr>
<td>Other expenses</td>
<td>6,49</td>
</tr>
<tr>
<td>Total compliance costs</td>
<td>57,79</td>
</tr>
</tbody>
</table>

From table 3, we can conclude that the self-employed taxpayers (regular professional assistance) incur, on average, notably higher compliance costs than wage taxpayers do (without professional help). This result meets others results, such as those presented by Sandford et al (1989; 2000), Slemrod and Sorum (1984); Blumenthal and Slemrod (1992); and Klun (2004).

**TABLE 3**

<table>
<thead>
<tr>
<th>Taxpayers with and without professional assistance</th>
<th>Annual income groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;4351</td>
<td>≥4351</td>
</tr>
<tr>
<td>Without professional help</td>
<td>57,79</td>
</tr>
<tr>
<td>Occasional professional help</td>
<td>29,00</td>
</tr>
<tr>
<td>Regular professional help</td>
<td>456,50</td>
</tr>
</tbody>
</table>

**RESULTS**

In this section, our aim is to analyze the main determinants of the Personal income tax compliance in Portugal. We test the influence of taxpayers’ characteristics in the compliance costs they incur. That is, if personal characteristics (such as age, level of education, marital status, number of dependents), economic factors (employment status, income level, and income sources), technical factors (level of knowledge of tax laws) or psychological factors (stress and anxiety) have any influence on compliance costs.

Thus, in order to analyze the relationship between compliance cost and any demographic, economic and technical variables, we use a variance analysis or t test, depending on the case. In all situations the dependent variable is “Compliance Cost” (CC) and the independent variables are the characteristics of tax-fillers (such as marital status, age, dependents, education level, income, categories of income, perception of time spent in tax matters, and so on).

In this study the compliance costs were calculated according to the kind of help, professional or non professional help, of taxpayers. It was necessary to determine the influence of these variables on the compliance costs.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Average compliance cost</th>
<th>$t$ / $F$</th>
<th>df</th>
<th>$p$-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>77,24</td>
<td>1,165</td>
<td>228</td>
<td>n.s**</td>
</tr>
<tr>
<td>Not married</td>
<td>90,05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 dependent</td>
<td>74,54</td>
<td>16,801</td>
<td>3,226</td>
<td>0,000*</td>
</tr>
<tr>
<td>1 dependent</td>
<td>53,54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 dependent</td>
<td>76,14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 or more dependents</td>
<td>175,07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>53,38</td>
<td>1,203</td>
<td>4,225</td>
<td>n.s.**</td>
</tr>
<tr>
<td>25-35</td>
<td>86,13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36-55</td>
<td>85,48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56-65</td>
<td>83,80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;66</td>
<td>50,38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>52,82</td>
<td>11,392</td>
<td>2,227</td>
<td>0,000*</td>
</tr>
<tr>
<td>Secondary school</td>
<td>90,90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University degree</td>
<td>106,46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage earner</td>
<td>76,54</td>
<td>4,308</td>
<td>228</td>
<td>0,002*</td>
</tr>
<tr>
<td>Self employer</td>
<td>123,49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 4 351</td>
<td>57,78</td>
<td>17,210</td>
<td>5,224</td>
<td>0,000*</td>
</tr>
<tr>
<td>4 351 – 6 581</td>
<td>41,19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 581 – 16 317</td>
<td>61,02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 317 – 37 528</td>
<td>106,07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37 528 – 54 388</td>
<td>178,00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 54 388</td>
<td>173,25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>89,15</td>
<td>0,531</td>
<td>228</td>
<td>n.s.**</td>
</tr>
<tr>
<td>Not Good</td>
<td>80,55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Categories of income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 category</td>
<td>71,73</td>
<td>3,725</td>
<td>2,227</td>
<td>0,003*</td>
</tr>
<tr>
<td>2 categories</td>
<td>94,29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 or more categories</td>
<td>174,00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulties</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without difficulties</td>
<td>117,08</td>
<td>6,919</td>
<td>228</td>
<td>0,000*</td>
</tr>
<tr>
<td>With difficulties</td>
<td>49,63</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Asterisk indicates that the influence of independent variables on compliance cost is significant at 95 per cent of confidence level.
** The test is not significant.
Table 4 presents the effects of these independent variables on compliance costs of taxpayers without professional help. The hypotheses were tested with 95 per cent of confidence level. The results presented were obtained using SPSS 14.00 software.

Table 4 indicates that from the set of personal variables only the numbers of dependents and the education level have a significant influence on compliance costs, holding the other variables equal, with $F(3,226) = 16.801$ and $p$-value $<0.000$, and $F(2,227) = 11.392$ and $p$-value $<0.000$, respectively.

The more educated taxpayer tends to incur higher compliance costs. On average, the cost of compliance increases with educational attainment, both due to the increasing number of hours and the higher average valuation of an hour for more educated households.

Regarding to the number of dependents, the average compliance cost for the highest group is significantly higher than for any of the other groups.

On what to economic variables are concerned, the activity as well as the income has an isolated impact on the total average of compliance cost, with $t (1,228) = 4.308$ and $p$-value $= 0.002$, $F (5, 224) = 17.210$ and $p$-value $<0.000$, respectively.

One important conclusion is that the relation between compliance costs and income is progressive. That means that, under the Portuguese tax system, the overall pattern is for personal compliance costs to rise together with income.

As far as the activity is concerned, the results point out the strong relationship between higher compliance cost and self-employment. Holding the other factors equal, the self-employed incur more compliance costs on average than the wage earners. In our view, the main reason for this difference could be the different tax status of both taxpayers.

Self-employed taxpayers have a more detailed and complex set of rules to follow (usually also having different sources of income), and wage earners only have to declare their wage income to the Tax Authorities, and regular source with holding usually comes close to the tax liability. The complexity of the tax return for the self-employed is bigger than for the other reference group. Actually, during the process of interviews, wage earners taxpayers frequently stated, “My tax affairs are simple.”

Concerning technical factors, the results show that the number of categories of income and the taxpayers’ perception of complexity of tax affairs are two key factors in determining the level of compliance costs, with $F(2,227) = 3.725$ and $p$-value $= 0.003$, and $F(228) = 6.919$ and $p$-value $< 0.000$, respectively.

There is a predominantly progressive relation between the increase of categories of income and the increase of compliance costs. We can justify this by the complexity of the tax return with more categories of income as well as by the number of fiscal rules which differ in the different categories.

The perception of complexity is also responsible for higher compliance costs. This perception is quite widespread among taxpayers over 55 years old, with lower educational levels, among self-employed and pensioners, among receivers of income from movable capital, capital gains and, especially, among taxpayers with high levels of income.

The major difficulties pointed out by taxpayers in filling tax returns were: interpretation of tax rules regarding the complexity of deductibles, tax allowances, deductibles, tax benefits, number of dependents included in the tax unit, the constant changing of tax rules, and the complexity of tax forms, among others.

For taxpayers with professional assistance, results show there aren’t any statistical significant effects of demographic, economic and technical factors on compliance costs. This is understandable in the way that for taxpayers who paid for a professional adviser, the compliance cost doesn’t depend on the number of children, the marital state, the level of education, or the age of taxpayers. In this case, the compliance costs depend primarily on the amount paid to the tax adviser, which is normally set by the market and not by the personal, economic and technical characteristics of tax-fillers.

To conclude our study, we turn now to the results of “psychological costs” incurred by taxpayers.

The “psychological costs” are the mental and emotional costs, such as anxiety and stress, which taxpayers experience when dealing with the tax obligations (Sandford, 1973; Diaz and Delgado, 1995; Woellner et al, 2001; Woellner et al, 2007)
The psychological costs are intangible, and so they are difficult to put a price on. Nevertheless, in our study we have tried to measure, qualitatively, the stress and anxiety incurred by taxpayers when complying with their tax affairs. We believe this aspect of the study is of particular significance, as the issue of psychological costs has been a largely neglected area of tax compliance costs research, as we have already highlighted before.

The evaluation of the psychological costs incurred by Portuguese taxpayers when filling in a tax form was conducted using a qualitative indicator: “emotional costs”. This indicator shows the state of mind before and after the completion of a tax form. In the survey, we started by asking taxpayers: “How do you feel before filling in the tax forms?” (Very calm, calm, neither/nor, stressed, much stressed). After finishing the completion of the tax return we asked: “How do you feel after filling in the tax forms?” (Very calm, calm, neither/nor, stressed, much stressed). These reactions have a real impact on time spent on compliance and even on the willingness to comply.

We then created an indicator to measure psychological costs: 1- taxpayers who incur emotional costs; 0- taxpayers who don’t incur emotional costs. For example, if taxpayers changed their state of mind from stressed to calm, they incurred psychological costs. If taxpayers didn’t change their state of mind but were stressed before filling in the tax form and stressed afterwards, they also incurred psychological costs. However, if taxpayers were calm before and after filling in the tax form, they didn’t incur psychological costs.

Consequently, feelings following the completion of the tax return are unequally divided between those taxpayers for whom this task has been a stressful burden and those who have not perceived it as such, as can be seen from on tables 5 and 6.

### Table 5
**Psychological Costs and Age**  
(\% Percent)

<table>
<thead>
<tr>
<th>Age</th>
<th>Emotional costs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without emotional costs</td>
<td>With emotional costs</td>
</tr>
<tr>
<td>18-24</td>
<td>100,0</td>
<td>100,0</td>
</tr>
<tr>
<td>25-35</td>
<td>91,7</td>
<td>8,3</td>
</tr>
<tr>
<td>36-55</td>
<td>85,3</td>
<td>14,7</td>
</tr>
<tr>
<td>56-65</td>
<td>53,6</td>
<td>46,4</td>
</tr>
<tr>
<td>&gt; 65</td>
<td>40,0</td>
<td>60,0</td>
</tr>
<tr>
<td>Total</td>
<td>80,0</td>
<td>20,0</td>
</tr>
</tbody>
</table>

From table 5, we can conclude that the higher the age of taxpayers the more stressful they felt in the completion of the tax return, with $X^2 (4) = 42.135$ and $p-value < 0.001$. But not all participants showed psychological costs. The youngest group of taxpayers (18-24 year olds) didn’t feel anxiety or any other emotional cost in the process of compliance. One reason for this situation could be due to the definition of tax unit in the Portuguese tax system. In fact, in Portugal, the definition of dependents includes all children up to 25 years old who have no economic independence.
In table 6, the percentage of taxpayers with a primary level of education who incurred psychological costs is 30.0 per cent. The other groups, while suffering from anxiety in the process of compliance, present lower percentages: 12.3 and 14.5 per cent for secondary school graduate and university graduate taxpayers, respectively. For taxpayers who are less educated the psychological costs were higher, with $X^2(2) = 9.798$ and $p-value = 0.007$.

We can conclude from tables 5 and 6 that the tax form is obviously a theme which causes concern among Portuguese taxpayers.

**CONCLUSIONS**

From the set of results of the empirical analysis some highlights similar to prior research compliance costs can be drawn. On one hand, for the taxpayers without professional assistance, a higher number of dependents and higher school levels are associated with higher compliance costs; wage earners face lower costs than self employed individuals; higher income levels induce higher compliance costs. On the other hand, for taxpayers with professional assistance, we didn’t find significance influence between the personal, economic and technical attributes of taxpayers and the compliance costs. Actually, for this group of taxpayers the main determinant of compliance costs is the fees paid for the tax adviser, which depends primarily on the value fixed by market and not on the characteristics of individuals.

Regarding the psychological costs, we conclude that the Portuguese taxpayers do incur in psychological costs caused by anxiety and stress and, as far as these are concerned, elderly and less educated taxpayers have higher psychological costs.

We believe that the results here presented further contribute to the research in the field. Firstly, this paper presents new evidence for a country where there is no prior study that quantifies the compliance costs of taxation for individual taxpayers and the main determinants that influence them. It also shows that the main conclusions of our analysis do not differ from other studies in this area, such as Slemrod and Sorum (1984), Sandford et al (1989), Blumenthal and Slemrod (1992), Allers (1995), Diaz and Delgado (1995), Chattopadhyay e Das-Gupta (2002), and Klun (2004). Secondly, we inserted a new indicator to measure the psychological costs of taxpayers, the “emotional costs”, as indicator which has been neglected in the international tax compliance literature. In fact, the psychological costs incurred by taxpayers have received little attention by researchers, except most recently, in Australia, Woellner et al (2001) and Woellner et al (2007).

However, it is important to highlight that our study was not supported, and so our sample was selected from the district of Coimbra, a convenience sample to the authors. Even though, in Portugal, the fiscal system does not differ according to the Portuguese districts or regions. This means that the tax compliance obligation and consequently the tax compliance costs do not differ from taxpayers in one region to others in different regions. Moreover, we think any research that assesses the taxpayers’ point of view is important evidence to place before policy-makers. Once compliance costs and the role of taxpayers are important in developed countries, this argument becomes even stronger.
In conclusion, the quantification of Portuguese compliance costs and the identification of groups of taxpayers with higher compliance costs have been raising some interest among tax academics, practitioners and specially policy makers in Portugal, with the aim of simplifying the tax system and minimize such costs for individual taxpayers. So, in further research it is important to identify and quantify the compliance costs and their main determinants for all Portuguese taxes. We hope this research will stimulate research tax compliance costs in other Portuguese taxes and that some internationals comparisons will be possible in the future.

REFERENCES


