Precursors of professionalism of business graduates: implications for business education and the profession

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ABSTRACT

Business education may need an overhaul when it comes to training students to become socially responsible managers and professionals, evidenced by the prevalence of questionable practices of corporate agents trained by the present educational system. In this regard, this study relies on frameworks of professionalism as defined by scholars (Brint, 1996; Freidson, 2001; Imse, 1962) to examine the values and attitudes of business students as they graduate but before joining their profession. The study used survey responses of senior-level undergraduate students, from over 100 colleges in the US, collected by the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA) across two academic years 2006-2007 and 2007-2008. Survey responses from the College Senior Survey (CSS) database formed a nationally representative sample for testing the research questions. This research utilized business students' factor scores derived from a prior confirmatory factor analysis (CFA) using the same CSS dataset to compare business students' factor scores with those of students from other academic majors (Nino, 2013). The CFA constructs below were modeled to validate their position in an overall framework of students' *precursors of professionalism* at the end of their undergraduate education (Nino, 2013). The four *precursors of professionalism* used for comparison were as follows: "autonomy of judgment," "desire for expertise," "self-concept," and "social-agency." The results revealed that business students differ significantly from other students in college in three of the four categories testing for professionalism.

Keywords: academic capitalism, autonomy, business education, business ethics, business students, confirmatory factor analysis, expertise, exploratory factor analysis, professionalism, self-concept, social agency

INTRODUCTION

Since the inception of business education at the start of the 20th century, the marketplace has exerted substantial influence on the practice of business education. Unlike other academic disciplines, business education did not develop from research and scientific methods used in the field; instead, it evolved from industry procedures and practices that were formalized as business theory and textbooks (Foundation, 1959; Pierson, 1959; Porter & McKibbon, 1988). Two major research reports – the Pierson (1959) study and the Gordon and Howell (1959) report – described the status of business education as it emerged and flourished into a major component of American higher education. These reports found weak business curriculum, poor faculty quality, and greater emphasis on the vocational curricula in U.S. business schools. The reports advocated for rigorous curricular content in business school courses, the integration of liberal arts courses, and additional academic training of business faculty to bring them up to the level of other university faculty (Hugstad, 1983; Pierson, 1959; Porter & McKibbon, 1988). Since then, business schools implemented some changes to improve the curriculum, faculty quality, and overall education of business students, however several scholars noted heavy emphasis on quantitative and analytics at the expense of professional development of business students (Daniel, 1998; Porter & McKibbon, 1988).

However, the high demand for business schools to produce an increasing number of graduates limited the need for these programs to overhaul education system, so many of the initial weaknesses identified continue to prevail even in the present time (Khurana, 2007; Swanson & Frederick, 2003). The educators in business schools continue to have a significant percentage of faculty from primarily professional tracks which substantially influenced the instruction in business classes (Khurana, 2007; Martensson, Bild, & Nilsson, 2008). Given the qualifications and training of the faculty, greater emphasis was placed on teaching the students applied skills over theoretical knowledge and less emphasis on critical thinking, and the integration of theory into practice (Daniel, 1998). Khurana (2007) indicated that business schools proliferated during a time when there were numerous unresolved questions about the role of business and corporations in society, as well as uncertainty about their willingness to include broader societal objectives in their education. Therefore business schools felt that it was safer to respond to the demands of the market, which had an insatiable appetite for applied skills but not necessarily all skills that professionals ought to have. As a result, the practical and applied skills education approach that business schools followed may have influenced business students' professional attitudes.

For that reason, in this study, the professionalism framework was selected to evaluate business students' professional attitudes and readiness as they graduate from college. Scholars identified common characteristics among professionals that include the following: (a) expertise that professionals develop through extensive education and training; (b) a "social-trustee" element, that compels individuals to focus on the public good and restrain from actions of self-interest; and (c) autonomy which manifests when professionals commit to independent judgment guided by special knowledge (Brint, 1996; Imse, 1962). Other scholars studying "professionals" added another construct to the professionalism framework that they called *self-concept* (Arthur, 1995; Freidson, 1985, 1994; Haywood-Farmer & Stuart, 1990). This category predicted readiness for carrying out the responsibilities of a professional role. In this study, these elements are referred to *as precursors of professionalism* (Nino, 2012). These precursors are indicative of the professional attitudes that business students possess as they graduate from college and enter

their professional careers. Senior-level business students cannot be defined as professionals at the end of their undergraduate program because they have not attained the necessary experience or the professional association in their field yet, which is a necessary requirement to become a professional and to be considered within those ranks (Brint, 1996; Freidson, 1984). This study uses the precursors as the markers of students' professionalism, for comparison among senior-level college students, at the beginning of their journey to their prospective careers.

LITERATURE REVIEW

The review of the literature and theoretical frameworks are organized to discuss the factors that may have influenced business education as well as the development of professionalism in business school. These areas discussed are as follows: (a) ethical development of business students; (b) professional theory and studies in professionalism in business and other specified disciplines.

Ethical Development of Business Students

Few research studies have addressed business students' attitudes towards societal issues and their ethical development during college within a model of professionalism. Piper, Gentile, and Parks (1993) interviewed forty-two first-year Harvard MBA students in a study evaluating their moral constructs. The study found that these students had a limited understanding of systemic harm and societal injustice and the consequences of their decisions, although they had a strong sense of interpersonal accountability for trustworthiness and honesty (Education, 2008; Piper et al., 1993). Many of these students lacked encouragement to think critically about societal issues and the influence of business on society (Piper et al., 1993). However, (Pascarella & Terenzini, 1991) found evidence that college students' moral reasoning abilities were enhanced during undergraduate study especially when intentional curriculum and methods were used.

In addition, Delaney (2005) studied the influence of receiving ethical training on moral reasoning ability (MRA) of students. He found significant differences in MRA in students receiving additional curriculum in ethics (Delaney, 2006). McNeel (1994) conducted a meta-analysis of students' moral development in undergraduate programs finding an average advantage of 28% for seniors over freshmen on the Defining Issues Test (DIT), which is a measurement model for moral development. For business students, if these patterns of moral development during college years were missing due to a lack of intentional curriculum and assessment of results, then these weaknesses may result in later problems in students' professional lives (Khurana, 2007; Parks, 1993; Swanson, 2004; Swanson & Frederick, 2003). Other studies showed a significant difference in business students' academic honesty during college years (McCabe & Trevino, 1995) which further indicates that business students might be predisposed to ethical vulnerability.

Some studies indicated that business schools did not attempt to change their programs in spite of the rise in ethical misconduct in the corporate environment (Khurana, 2007; Swanson & Frederick, 2003). Crainer and Dearlove (1999) reported that the vast majority of MBA programs do not include a business ethics course within their mandatory requirements. It was not surprising that the reputation of several prominent business schools was harmed, given the association of their alumni with a number of infamous corporate scandals (Swanson, 2004). The

scholars that were mentioned evidenced a strong signal that business students were not developing as well as they should as professionals during their graduate and undergraduate programs.

Yet another influence on business education was the main accrediting agency for business programs in the United States, the AACSB. This agency had the most authoritative power to dictate requirements to business schools. In 2003 the AACSB included a recommendation that all business school curricula include content covering ethical practices as a requirement for accreditation, but they did not specify how business schools should incorporate this requirement into current courses and/or course sequences (Miles, Hazeldine, & Munilla, 2004). As a result, the coverage of professional ethics in business coursework was inconsistent (Miles et al., 2004; Swanson & Frederick, 2001). Deans from business schools stated that ethics and professional education was integrated in several courses, such as marketing, finance, operations management, accounting, and strategic management. Yet Swanson (2004) reported that a large number of business professors found it burdensome to include well-developed case points on ethics. Swanson further explained that the professors rationalized their decision based on the desire to cover the required material in their courses and the lack of training in teaching these concepts effectively. This may have influenced the moral development of business students.

Professional Theory and Studies in Professionalism

Professional theory as posited by Abbott (1988) borrowed from institutional theory in its use of organized constructs to classify expertise. Knowledge has always required an extensive quantity of learning and human decision making to manage resulting expertise. Professional organizations held individuals together once they graduated from college, based on institutionalized arrangements that created economic returns to their constituencies (Abbott, 1988). The promise of a profession in areas of prestige, compensation, and social network has remained a consistent goal for individuals in Western cultures. These professions formed organized bureaucracies in fields such as law, medicine, accounting, engineering, and architecture. However, colleges and universities were the dominant mechanisms for producing professionals.

The original intent of university education promised more than the teaching of expertise (Khurana, 2007; Swanson & Fisher, 2008). In theory, the university should have emphasized all elements that supported the development of a professional: "autonomy of judgment," "desire for expertise," "self-concept," and "social-agency"(Arthur, 1995; Brint, 1996; Khurana, 2007). The theoretical framework outlined the use of professional theory and models for understanding the business profession. The following sections outline the conceptual basis for this study.

Numerous scholars (Freidson, 2001; Hall, 1968; Imse, 1962) outlined models of professionalism that included the following components (a) belief in service to public; (b) belief in self-regulation; (c) sense of calling to field; (d) a feeling of autonomy; and (e) professional organizations as a source of authority and reference. Hall (1968) used a 50-item instrument known as Hall's Professionalism Scale. He compared and ranked different professionals in accounting, advertising, law, engineering, medicine, business, and social work. Hall's studies focused on the structural and attitudinal facets of professionalization that influenced the strength of professional values. He stated that there was a link between the strength of professional attitudes that took place in the training program and the profession itself. One of Hall's findings

indicated an inverse relationship between bureaucratization and professionalism. An increase in bureaucracy in the workplace resulted in employees achieving lower scores on the professionalism scale. Hall (1968) attributed these results to employees' loss of autonomy due to the established hierarchy in the work environment that reduced employees' decision-making ability. This was an important finding due to the presence of a formal organizational structure in most businesses (Hall, 1968).

Haywood-Farmer and Stuart's (1990) study examined professional values. They developed an instrument to measure the degree of professionalism within medical services professionals. Haywood-Farmer and Stuart used an exploratory factor analysis (EFA) to test an instrument that measured the following scales of professionalism: (a) job autonomy; (b) societal role and impact; (c) expertise; (d) self-confidence; and (e) feeling of superiority. They found that the dimensions generated by the study were more useful to assess the degree of professionalism than individual components, such as expertise or autonomy.

Several professionalism studies conducted in the nursing profession examined the dimensions of nurses' general self-concept in connection with their profession (Cowin, 2001; Hensel, 2009). One study by Cowin (2001) used factor analysis to identify the following dimensions of professional self-concept: (a) a nurses' general self-esteem; (b) empathetic support given to another; (c) communications, defined as effectively sharing information and ideas; (d) knowledge using nursing skills and theories; (e) staff relations such as collegial relationships; and (e) leadership. These dimensions of "self-concept" were matched closely in this present study.

This study focuses on the *precursors of professionalism* for senior-level business students. The study assumes that the values that students hold at the beginning of their careers are likely to influence the type of professionals they become (Nyström, 2009). The model provides a lens for scholars in education and ethics to examine the promise of education as it was intended (Damon, 2009; Kohlberg, 1976; Pascarella & Terenzini, 1991). This model allows scholars to explore the professional attitudes of business students immediately before they join the workforce. Following is a redefinition of the *precursors of professionalism* and the elements used to represent them as presented in a previous study (Nino, 2013).

Autonomy of Judgment

Survey items focusing on precursors such as critical thinking, analytical and problem solving abilities, general knowledge, and expertise in the discipline were identified as manifestations of the *autonomy of judgment* construct as shown in Table 1 (Appendix). Collectively, they provide an indication of students' ability to behave autonomously, once they developed expertise in their respective disciplines. The items chosen within this factor in Table 1 (Appendix) are representative of descriptions of the "autonomy of judgment" factor in the literature (Freidson, 1985).

Desire for Expertise

Students' self-identified desire to become an authority in their discipline, desire to be recognized by colleagues for expertise in their discipline, and goals to have administrative responsibility in their chosen field were used as manifestations of students' overall *desire for expertise* as shown in Table 1 (Appendix). To represent these concepts accurately, the term

desire for expertise – rather than expertise – will be used throughout the paper. The items chosen within this factor in Table 1 (Appendix) are representative of descriptions of the expertise factor in the literature (MacDonald & Ritzer, 1988).

Self-concept

For this construct, the study measured precursors such as students' social and intellectual self-concept, leadership ability, public speaking ability, and self-understanding. These items were used as manifestations of students' overall *self-concept* as shown in Table 1 (Appendix). These notions provided indicators for students' superior feelings of themselves as they progress in their professionalism. The items chosen within this factor are representative of definitions of professionalism from the literature (Cowin, 2001).

Social Agency

The term *social agency* was used when referring to this construct throughout the study; this is consistent with the HERI's terminology for these items. The items chosen within this factor from Table 1 (Appendix) are representative of "social-trustee" attributes among professionals as described in the literature (Freidson, 1985; Moore & Rosenblum, 1970). These attributes represent students' desire to actively participate in their communities and engage in helping others beyond their professional call of duty.

The theoretical framework outlined the use of professional theory and models for understanding of business graduates' professional attitudes. The following sections outline the conceptual basis of this study based on specific research questions and methodology.

RESEARCH QUESTIONS AND AIMS

The following is the main research question, as well as corresponding aims and hypotheses for the four facets of professionalism, as supported by the theoretical frameworks:

Are the professional attitudes measured by factor scores of business students in "autonomy of judgment," "desire for expertise," "self-concept," and "social-agency" different from students in other disciplines?

Autonomy of Judgment: Hypothesis 1.1

This aim is to test students for specific values espoused by the "autonomy of judgment" aspect of professionalism such as the ability to think critically based on knowledge in the discipline, in order to have responsible professional judgment. This compares business students' scores to students in other major.

Hypothesis 1.1: Business students have lower scores in their "autonomy of judgment" factor of professionalism compared to students from other majors.

Desire for Expertise: Hypothesis 2.1

This aim is to test students for specific values espoused by the "desire for expertise" aspect of professionalism, such as the intent to become an authority in one's field and to be

recognized by other colleagues in the profession. The literature indicates that the market rewards business students for "expert" knowledge such as quantitative and analytic skills; therefore, the hypothesis is as follows:

Hypothesis 2.1: Business students have higher scores in their "desire for expertise" factor of professionalism compared to students from other majors.

Self-concept: Hypothesis 3.1

This aim is to test students for specific notions expressed by the "self-concept" aspect of professionalism, such as leadership, self-confidence, and public-speaking skills. The literature indicates that business students have high "self-concept" due to excessive market rewards for their technical expertise; therefore, the hypothesis is as follows:

Hypothesis 3.1*:* Business students have higher scores in their "self-concept" factor of professionalism compared to students from other majors.

Social Agency: Hypothesis 4.1

This aim is to test students for specific values espoused by the "social-trustee" aspect of professionalism such as social citizenship of a professional within a community. The literature states that business education has steered away from humanistic aspects of business education, thus the hypothesis is as follows:

Hypothesis 4.1: Business students have lower scores in their "social-trustee" factor of professionalism compared to students from other majors.

METHODOLOGY

The study used the CSS data collected by Higher Education Research Institute (HERI) annually at the University of California, Los Angeles (UCLA). This study relied on a prior CFA that validated the constructs and factor scores that are used for comparison in this study (Nino, 2013). HERI annually conducts a survey and collects data that results in a nationally representative sample of college seniors from over 100 universities annually. The survey measures students' values, attitudes and goals, assesses post-college plans and aspirations, and studies campus issues. The response formats for the survey items varied between scales of 1-4 and 1-5, with the most common type of responses ranges from "not important" to "essential."

Survey Data

The survey was administered to college seniors during exit interviews, at the end of the 2007-2008 academic years. The dataset has a sample of 13,063 respondents, of which 83% White/Caucasian and 62% were females; additionally 81% of the institutions participating were private. The participants in the study majored in a variety of disciplines such as humanities, social sciences, sciences, and various professional fields. Students from 2-year colleges and religious institutions were not included in this study. Religious institutions were excluded to avoid any confounding influence of religion on students' scores. Missing data was replaced using the Direct Maximum-Likelihood Method (ML).

Measures

The goal of this study was to estimate differences in the factor scores of business students and students from other academic disciplines – such as social studies, science fields, and humanities – across the dimensions of the *precursors of professionalism* model. The construct validity of these factors was established through an Exploratory and a Confirmatory Factor Analysis (CFA) in a previous study testing the dimensionality of the survey items related to professionalism using two academic years 2006-2007, and 2007-2008 (Nino, 2013). To test whether or not there were significant differences between business majors and their non-business major peers, the four individual analysis of variance (ANOVA) models were fitted to the data; one for each of the four factor scores. Although the assumptions for the CFA were tested previously, the assumptions of the ANOVA were tested for these models as well. Although there was negative skew in the distribution of the "autonomy of judgment" factor scores, the comparisons were still estimated because such a large nationally representative sample was used (Tabachnik and Fidell; 2007); additionally, because this is an understudied area in higher education, the substantive importance merit inclusion in the study.

Two covariates were selected, gender, and type of institution (e.g. private or public), to test if business students' professionalism scores varied based on these covariates. The two covariates included in this study, gender and type of college, were selected based on prior research addressing elements that influenced undergraduate business students' responses to survey data (Browning, 2003; Carpenter, Harding, Finelli, & Passow, 2004; Knotts, Lopez, & Mesak, 2000; Lan, Windsor, McMahon, King, & Rieger).

RESULTS

The following paragraphs address the results of the comparison for the four constructs of the *precursors of professionalism*, interpretation of findings, and a discussion of the institutional and environmental factors influencing these results. The primary focus of this study was to assess senior-level undergraduate business students' professionalism values "autonomy of judgment," "desire for expertise," "self-concept," and "social agency" and compare them to students who completed non-business undergraduate degrees. The following discussion presents the results from testing each of the hypotheses regarding differences in average scores on the four constructs between undergraduate business and non-business students.

Autonomy of Judgment Measure

Hypothesis 1.1: Business students have lower scores in their "autonomy of judgment" factor of professionalism as compared to students from other majors.

This hypothesis sought to determine whether business students, due to various influences not defined or measured in the study (e.g., business education, environmental influences, and personal disposition), would have lower observed scores in their "autonomy of judgment" aspect of professionalism. The results of the ANOVA indicate that the differences in "autonomy of judgment" mean factor scores across the two categories (business and non-business majors) was not significantly different from zero as shown in Table 2 (Appendix), in addition the magnitude of the effect of major ($\eta^2 = 0.019$) was also small. In addition, business students comprised 17% of the sample and their mean factor-scores for "autonomy of judgment" were lower than 43% of

their peers in college but higher than 40% of other peers, after adjusting for institutional and gender covariates. The estimated marginal means of "autonomy of judgment" adjusted for sex and institution type are included Table 3 (Appendix). Business students have lower scores, on average, than education, social sciences, physical sciences, history/political science, health professional, engineering, and undecided students, which constitute 43% of the sample. Thus, Hypothesis 1.1 was not supported.

Desire for Expertise Measure

Hypothesis 2.1: Business students have higher scores in their "desire for expertise" factor of professionalism as compared to students from other majors.

This hypothesis sought to determine whether business students, due to various influences not defined and measured in the study (e.g., business education, environmental influences, and personal disposition), would have higher observed scores in their "desire for expertise" aspect of professionalism. The results of the ANOVA indicate that differences in "desire for expertise" across the two categories (business and non-business majors) were significantly different from zero ($p < 0.05$) as shown in Table 4 (Appendix) , but the magnitude of the effect of major was small ($\eta^2 = 0.0001$). Business students were the highest-ranking group – based on mean "desire for expertise" factor scores – among all majors after adjusting the marginal means for the covariates in the study; the estimated marginal means for "desire for expertise" adjusted for sex and institution type are included in Table 5 (Appendix). It is important to note that business students (n=2,227) have higher scores than 83% of their peers; this main effect was statistically significant (F (1, 13,055) = 119.2; $p < 0.001$). Thus, Hypothesis 2.1 was supported.

Self-concept Measure

Hypothesis 3.1: Business students have higher scores in their "self-concept" factor of professionalism as compared to students from other majors.

This hypothesis sought to determine whether business students, due to various influences not defined or measured in the study (e.g., business education, environmental influences, and personal disposition), would have higher observed scores in terms of their "self-concept" aspect of professionalism. The results for the ANOVA indicate that differences in "self-concept" scores varied significantly for the two categories (business and non-business majors), and while the differences in reached the required statistical significance ($p < 0.05$) as shown in Table 6 (Appendix), the magnitude of the effect of major was small ($\eta^2 = 0.01$). Business students' mean factor-scores for "self-concept" were higher than 74% of their peers in college, but 9% of their peers had higher scores on average, after adjusting for gender and institutional covariates (the marginal means for "self-concept" can be found in Table 7 (Appendix). The test of the main effect of major on "self-concept" confirmed that there were significant differences between business and non-business students (F (1, 13,055) = 21.54; $p < 0.0001$). Thus, Hypothesis 3.1 was supported.

Social Agency Measure

Hypothesis 4.1: Business students have lower scores in their "social agency" factor of professionalism as compared to students from other majors.

This hypothesis sought to determine whether business students, due to various influences not defined or measured in the study (e.g., business education, environmental influences, and personal disposition) would have lower observed scores in terms of their "social agency" aspect of professionalism. The results of the ANOVA indicate that "social agency" scores varied significantly for the two categories (business and non-business majors) and while the differences in "social agency" across the two categories reached the required statistical significance ($p < 0.05$) as shown in Table 8 (Appendix), the magnitude of the effect of major was small ($\eta^2 = .001$). Seventy-one percent of business students' peers had higher scores – on average – and 12% of their peers had lower marginal means scores for "social agency", after adjusting for gender and institutional type as indicated in Table 9 (Appendix). The test of the main effect of business/non-business student confirmed that there were significant differences between business and non-business students (F (1, 13,055) = 28.94; $p < 0.001$). Thus, Hypothesis 4.1 was supported.

DISCUSSION

Following is a discussion of the interpretations of the results of each of the latent factors: "autonomy of judgment," "desire for expertise," "self-concept," and "social agency."

Autonomy of judgment

Due to the overwhelming emphasis on experiential skills and knowledge over theoretical understanding, the study hypothesized that business students have lower scores, on average, on the measure of "autonomy of judgment" compared to their peers (see Hypothesis 1.1 for additional clarification). The result of the pairwise comparison between business and non-business students for this factor was not significant. The marginal means of business students were lower than 43% of their peers falling approximately in the middle of mean scores for each major as shown in Table 3 (Appendix). Future studies for this factor should consider developing survey items that are more sensitive to measuring "autonomy of judgment." For example, future research could pilot a survey tool including additional items that measure critical thinking and independence of judgment skills.

Desire for expertise

The study hypothesized that business students have higher scores than their peers on their "desire for expertise" factor (see Hypothesis 2.1 for additional information). The results of the comparison between academic disciplines showed that mean "desire for expertise" score of business students was higher than that of all their peers. The business profession has high financial rewards for managers and executives working for profitable corporations (Crainer & Dearlove, 1999; Khurana, 2007), so it is not surprising that business students desire to develop expertise in their field. Bowles and Gintis (1976) have discussed the hidden language in business education, emphasizing the corporate bottom-line and the success of managers in businesses. Additionally, the emphasis of business schools on applied knowledge or "expertise" resulted in higher salaries for students, since this applied knowledge was responsive to corporate needs. This satisfied the desires of students and business schools.

Self-concept

The study hypothesized that business students have a higher mean score on "self-concept" than that of their peers in other academic disciplines (see Hypothesis 3.1 for additional information). The estimated marginal means show that business students had a higher scores than 74% of the sample. This finding suggests that business education may have more emphasis on students' leadership abilities compared to most other majors. This was confirmed again by a survey that was administered annually by the Graduate Management Admission Council (GMAC). In 2011 GMAC conducted a comprehensive, global survey, of employers regarding their hiring practices which consisting of 1,509 participants representing 905 companies in 51 countries. Most employers reported that compared with other employees at the same job level, business students have higher abilities in learning, motivation, and leadership (General Management Aptitude Test, 2011). This significant difference in mean factor scores suggests that business students' education may influence their "self-concept" as measured in this study.

Social Agency

The study hypothesized that business students have lower scores than their peers in their "social agency" factor (see Hypothesis 4.1 for clarification). The results of comparisons between disciplines showed that mean scores of business students were lower than 71% of their peers in college. The low mean factor scores suggests that business students' education may influence their "social agency" as measured in this study. This finding suggests that business education has low emphasis on ethical and social issues in their education as discussed by prior scholars (Khurana, 2007; Swanson & Fisher, 2009; Trank & Rynes, 2003). Business students rank higher than technical majors – such as engineering, math, and physical sciences – in mean factor scores of "social agency," but lower than their peers in fields such as English, education, humanities, and the social sciences, as shown in Table 9 (Appendix). This may further indicate that these students are being educated in a manner more similar to technical fields, such as engineers, physicists, and other physical scientists. The business curriculum's emphasis on technical subjects, such as accounting, finance, marketing, economics, and statistics, does not allow much room for meaningful education in disciplines such as history, sociology, or the integration of these themes within students' education (Bennis & O'Toole, 2005; Khurana, 2007). Bennis and O'Toole (2005) criticized the direction of business education and graduate business research towards scientific methods, highlighting that scientific methods cannot replace human judgment, especially in the area of ethics and morality. Additionally, since business students are rewarded for their expertise with high salaries and prestigious managerial positions, they are more motivated to achieve these milestones of expertise (Crainer & Dearlove, 1999). Although it continues to be necessary to provide technical training to business students in order to meet corporate needs, it is critical to recognize that business students become managers of organizations where their decisions have societal consequences. Therefore, there is an unmet need in business students' understanding of their future roles in business within the larger societal context (Colby et al., 2011; Khurana, 2007).

IMPLICATIONS

The interpretation of the results in this study leads to the explanation of the implications of these results for business education and the business profession. Compared to their peers—especially those who are in other social science fields—business students score higher than most in the areas of their "desire for expertise" and "self-concept" and lower in "social agency." Students' results in "desire for expertise" and "self-concept" show great promise in the development of their skills toward professionalism. These students are excited about their fields of discipline shown by their high scores in the "desire for expertise" factor. They also have confidence and leadership ability to succeed in their field shown by their scores in the "self-concept" factor. Their lower scores in "social agency" show that business students may be deficient in their promise to develop as full professionals. As previously noted, this study does not uncover the predictors that influence their scores, such as pre-collegiate individual characteristics, experiences and programs students joined in college, internships, parental attitudes, economic status of students, academic ability, and myriad other factors that may influence these precursors. Yet this study shows that students' major of study is a significant factor for students' scores, and that business students have low scores as compared to their peers in two important areas related to professionalism: autonomy and social agency.

Along these lines, Colby et al. (2011) in "*Rethinking Undergraduate Business Education"* call for integrative learning for students, which requires institutional intentionality. This integrative learning requires business students to think deeply about the concepts in liberal arts subjects and knead them together with business subjects. The curriculum must be actively mixed together, which does not occur by merely adding a humanities or a social science distribution requirement to business. Colby et al. call for programmatic emphasis on social influences, where students widen their angle of vision by paying explicit attention to the effects of business on society, and, conversely, the effects of society on business.

This present study confirms the need for all business programs to adopt an approach to business education that highlights the effects of this profession on society and allows students to develop a full professional identity that is embedded with the responsibility that is attached to the expertise that students develop. Before this study, scholars pointed to weaknesses of business education and to the dire consequences that these may have on our society. Their points have been made based on program observations, study of business curriculum, and corporate scandals involving business trainees (Borkowski & Ugras, 1998; Carpenter, Harding, Finelli, & Passow, 2004; Khurana, 2007; Trank & Rynes, 2003). This present study confirms that our business graduates echo the weaknesses identified by prior scholars, and this in turn reifies the critical need for the proliferation of ethical and moral training in business degree programs.

Last, this research should stimulate discussion and consideration of changes regarding the integration of interdisciplinary academic offerings in business programs with an emphasis on the social effects of business education and related ethical and philosophical issues. Although it may not be fiscally feasible to implement in all business programs in the current socio-economic climate, the continually growing research literature focused on [un]ethical business practices should serve as motivation for the business education community to adopt curricular policies that are responsive to our knowledge of the business education field.

LIMITATIONS

The limitations of using this CSS dataset were outlined by the previously used study that verified the CFA that resulted in the four constructs used in this research (Nino, 2013). Therefore, a summary of the limitations are restated here, in addition to new limitations specifically related to this study.

As mentioned in Nino (2013), CSS is a secondary dataset that has theoretical limitations since it was not specifically designed for this research. Therefore, the survey items used in this study had modeling restrictions.

The second major limitation of this study was the sampling strategy combined with the observational (e.g., non-experimental) nature of the data. Because several sub-populations were heavily over-sampled in the implementation of this survey, the assumption that the data were derived from a random sample of the population of interest was not met. In addition to a lack of balancing of the strata, there was also substantial over-sampling at the individual level as well: 60% of the subjects in the 2007 dataset and 62% of the subjects in the 2008 dataset were female.

The third limitation was the potential bias of self-reported measurements (Creswell, 2009). Although HERI researchers could have used vignettes, or short cases, that measure students' scores for professionalism measures objectively, they chose to include several self-reported measures of professionalism.

A final and fourth limitation is business students' predisposition to certain professional attitudes. Although it is likely that business students arrived at their college or university predisposed to focusing on developing expertise and less interest in contributing to society. Yet, students' choice of major and the norms within business schools, may in turn, support and nurture their natural tendencies, thereby increasing the likelihood that business students will achieve these results in their *precursors of professionalism*.

CONCLUSIONS

Business educators may need alternate approaches to business ethics education when it comes to educating students to become socially responsible managers (Khurana, 2007; Swanson & Fisher, 2009; Trank & Rynes, 2003). The results of this research suggest that undergraduate business students score significantly lower in the "social agency" factor, while scoring significantly higher in "desire for expertise" and "self-concept" factors of professionalism as compared to their college peers. This present study also confirms the need for all business programs to adopt an approach to business education that highlights the influence of this profession on society. This research suggests that if education has effects on students' values and attitudes, then business education may not have sufficient and equitable emphasis on the four facets of professionalism, resulting in graduates that are highly focused on their own objectives, but severely less connected to societal goals.

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APPENDIX

Table 1
Descriptive data for measured variables

Variable	Description	*M*	*SD*
Autonomy of Judgment			
SLFCHG04	Change: Ability to think critically	4.38	0.648
SLFCHG08	Change: Analytical and problem-solving skills	4.34	0.64
SLFCHG17	Change: General knowledge	4.34	0.60
SLFCHG19	Change: Knowledge of a particular field or discipline	4.66	0.54
SLFCHG25	Change: Preparedness for employment after college	4.20	0.744
Desire for Expertise			
GOAL04	Goal: Become an authority in my field	2.72	0.861
GOAL20	Goal: Obtain recognition from colleagues	2.33	0.90
GOAL10	Goal: Having administrative responsibility	2.58	0.853
Self-concept			
RATE23	Self-Rating: Self-confidence (social)	3.59	0.91
RATE12	Self-Rating: Leadership ability	3.87	0.816
RATE22	Self-Rating: Self-confidence (intellectual)	3.86	0.805
RATE18	Self-Rating: Public speaking ability	3.51	0.938
RATE24	Self-Rating: Self-understanding	3.89	0.787
Social Agency			
GOAL02	Goal: Becoming a community leader	2.29	0.93
GOAL21	Goal: Participating in a community action program	2.23	0.90
GOAL15	Goal: Influencing social values	2.51	0.889
GOAL12	Goal: Helping to promote racial understanding	2.26	0.932
GOAL18	Goal: Keeping up to date with political affairs	2.45	0.91
GOAL11	Goal: Helping others in difficulty	3.05	0.78

Table 2
Whole Sample Mixed ANOVA Results for "Autonomy of Judgment"

	df	*MS*	*F*	*Sig.**
Major: Business vs. Non-business	1	0.544	0.546	0.46
Gender:	1	0.166	0.166	0.684
Type of Institution	1	24.01	24.1	< 0.001
Error	13,055	0.997		

*p < 0.05

Table 3
2008 CSS Population Marginal Means and Standard Errors for "Autonomy of Judgment"

	N	*M*	*S.E.*
Business vs. Non-business			
Business	2,227	-0.040	0.022
All Others	10,836	-0.021	0.011
All Majors Sorted by Marginal Means			
Agriculture	39	-0.270	0.190
Other Non-Technical	1,125	-0.220	0.034
Fine Arts	707	-0.190	0.049
English	593	-0.140	0.058
Biological Sciences	1,143	-0.100	0.038
Humanities	1,093	-0.080	0.040
Mathematics/Statistics	224	-0.077	0.074
Other Technical	241	-0.051	0.077
Business	**2,227**	**-0.040**	**0.022**
Education	793	0.001	0.047
Social Sciences	2,174	0.019	0.026
Physical Sciences	296	0.020	0.067
History/Political Science	1,103	0.059	0.035
Health Professional	567	0.110	0.087
Engineering	730	0.200	0.043
Undecided	8	0.320	0.380

Table 4
Whole Sample Mixed ANOVA Results for "Desire for Expertise"

	df	*MS*	*F*	*Sig.**
Major: Business vs. Non-business	1	117.3	119.2	< 0.001
Gender	1	11.79	11.97	< 0.001
Type of Institution	1	8.443	8.576	0.003
Error	13,055	0.985		

*p < 0.05

Table 5
2008 CSS Population Means and Standard Deviations for "Desire for Expertise"

	N	*M*	*S.E.*
Business vs. Non-business			
Business	2,227	0.250	0.022
All Others	10,836	-0.018	0.011
All Majors Sorted by Marginal Means			
Mathematics/Statistics	224	-0.270	0.073
Undecided	8	-0.140	0.380
English	593	-0.130	0.058
Other Technical	241	-0.110	0.076
Physical Sciences	296	-0.100	0.066
Agriculture	39	-0.088	0.190
Humanities	1,093	-0.066	0.040
Social Sciences	2,174	-0.053	0.026
Biological Sciences	1,143	-0.016	0.038
Education	793	0.041	0.046
Health Professional	567	0.052	0.087
Engineering	730	0.065	0.043
Other Non-Technical	1,125	0.079	0.034
Fine Arts	707	0.086	0.049
History/Political Science	1,103	0.100	0.035
Business	**2,227**	**0.250**	**0.022**

Table 6
Whole Sample Mixed ANOVA Results for "Self-Concept"

	df	*MS*	*F*	*Sig.**
Major: Business vs. Non-business	1	20.88	21.54	< 0.001
Gender	1	185.2	191.1	< 0.001
Type of Institution	1	2.259	2.331	0.127
Error	13,055	0.969		

*p < 0.05

Table 7
2008 CSS Population Means and Standard Deviations for "Self-concept"

	N	*M*	*S.E.*
Business vs. Non-business			
Business	2,227	0.130	0.022
All Others	10,836	0.013	0.011
All Majors Sorted by Marginal Means			
Other Technical	241	-0.300	0.076
Fine Arts	707	-0.150	0.048
Health Professional	567	-0.110	0.086
Physical Sciences	296	-0.110	0.066
Agriculture	39	-0.099	0.180
Mathematics/Statistics	224	-0.030	0.073
Biological Sciences	1,143	-0.026	0.037
Engineering	730	-0.020	0.043
Social Sciences	2,174	0.008	0.026
Education	793	0.042	0.046
English	593	0.042	0.057
Other Non-Technical	1,125	0.090	0.034
Humanities	1,093	0.094	0.039
Business	**2,227**	**0.130**	**0.022**
Undecided	8	0.240	0.370
History/Political Science	1,103	0.260	0.034

Table 8
Whole Sample Mixed ANOVA Results for "Social Agency"

	df	*MS*	*F*	*Sig.**
Major: Business vs. Non-business	1	28.73	28.94	< 0.001
Gender	1	20.34	20.49	< 0.001
Type of Institution: Public vs. Private	1	3.529	3.556	0.059
Error	13,055	0.992		

*p < 0.05

Table 9
2008 CSS Population Means and Standard Deviations for "Social Agency"

	N	*M*	*S.E.*
Business vs. Non-business			
Business	2,227	-0.140	0.022
All Others	10,836	-0.003	0.011
All Majors Sorted by Marginal Means			
Other Technical	241	-0.660	0.075
Physical Sciences	296	-0.450	0.065
Mathematics/Statistics	224	-0.440	0.072
Agriculture	39	-0.350	0.180
Engineering	730	-0.320	0.042
Business	**2,227**	**-0.140**	**0.022**
Health Professional	567	-0.140	0.085
Fine Arts	707	-0.079	0.048
Biological Sciences	1,143	-0.069	0.037
Other Non-Technical	1,125	-0.017	0.033
Undecided	8	-0.017	0.370
English	593	0.018	0.057
Humanities	1,093	0.090	0.039
Education	793	0.120	0.045
Social Sciences	2,174	0.230	0.026
History/Political Science	1,103	0.400	0.034