How Relevant Is the MBA? Assessing the Alignment of Required Curricula and Required Managerial Competencies

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Masters of business administration (MBA) programs are being met with escalating criticism from academics, students, and various organizational stakeholders. Central to these criticisms is the contention that the MBA is wholly out-of-touch with the "real world" and is irrelevant to the needs of practicing managers. Examining this contention, we investigated the relevancy of MBA curricula in relation to managerial competency requirements. Relying on an empirically derived competency model from 8,633 incumbent managers across 52 managerial occupations, our results showed that behavioral competencies indicated by managers to be most critical are the very competencies least represented in required MBA curricula. Findings further indicate that institutional factors such as media rankings and mission orientation have no effect on the alignment of MBA curricula with critical managerial competencies.

In the reality of contemporary work organizations, managerial capabilities have typically been acquired through informal work experiences. For example, studies show that 70–90% of workplace learning occurs through on-the-job experiences, informal training, and mentoring (Pfeffer & Sutton, 2000; Tannenbaum, 1997). While trial and error and informal experiences can be fertile grounds for learning to perform the managerial role, they are also rather inefficient settings, requiring years of experience and the ability to synthesize learning that is extraordinarily unsystematic (McCauley, Moxley, & Van Velsor, 1998). For these and other reasons (e.g., economic incentives tied to formal

training), individuals eager to gain important managerial capabilities often turn to formal training opportunities such as certificate programs, university degree programs, or university-based executive education. Here, the prevailing logic is that formal training will offer a more efficient and effective means of acquiring the necessary competencies required to enact managerial roles. The prevalent adoption of this logic is clearly visible in the growth of graduate schools of business, where recent estimates show well over 100,000 graduate degrees in business are awarded annually (Pfeffer & Fong, 2002).

Despite, or perhaps because of, the steady growth and apparent economic prosperity of business schools and MBA programs, such programs are being met with escalating criticism regarding the capabilities they claim to impart. Although such criticisms reach as far back as the dawning of the American business school, this recent round has sparked considerable attention in both the academic and popular press. For example, the well-known Porter and McKibbin (1988) report il-

luminated the necessity for business schools to improve their ability to teach management, leadership, and other interpersonal skills. More recently, a number of scholars have strongly urged business schools to seriously reconsider their current approach to management education (Bennis & O'Toole, 2005; Ghoshal, 2005; Khurana, 2007; Mintzberg, 2004; Pfeffer & Fong, 2002).

The criticisms raised in these recent commentaries span a variety of concerns. For instance, in his highly critical book *Managers, Not MBAs*, Mintzberg (2004) argues that management is a professional trade, a craft to be honed through practice and experience, not in the traditional classroom. Mintzberg further purports that today's conventional MBA programs are more akin to specialized training grounds for the specific functions of business, rather than the broad practice of management. Pfeffer and Fong (2002) point to a substantial misalignment between the mastery of skills acquired in the MBA and the real-world impact of those skills. These authors cite studies suggesting that while many MBA graduates earn considerably more than their non-MBA counterparts, the effect of this difference is primarily due to pedigree and attendance at top programs rather than to the degree itself. Further, Pfeffer and Fong note that to date little evidence exists supporting the actual connection between mastery of the MBA curriculum and subsequent on-the-job behavior. Finally, Bennis and O'Toole (2005) strongly proclaim that "business schools have lost their way" by refusing to view management as a profession rather than a science. These authors further deride business schools for enacting this view by hiring and rewarding professors for their research prowess rather than their management experience. The result, Bennis and O'Toole argue, is that "the focus of graduate business education has become increasingly circumscribed—and less and less relevant to practitioners" (2005: 98).

Issues of Relevancy in Management Education

In sum, recent critics contend that the MBA is wholly out-of-touch with the "real world" and the needs of practicing managers. More specifically, these criticisms appear to converge rather clearly on a single pressing issue confronting contemporary graduate management education: *relevancy*. Indeed, referendums for relevancy in management education are said to be moving some areas of the field, such as behavioral science, toward a clear "legitimacy crisis" (Rynes & Trank, 1999). Rynes and Trank argue that this crisis has resulted in a dysfunctional and entirely reactive approach to management education including easier coursework, an exclusive focus on current events, grade inflation, an increase in

unqualified instructors, reactive curricular decision making, and so on. Anecdotally, even casual observers of business schools are likely to verify such trends. Yet, for questions of relevancy to have tangible value they must be couched in terms of relevancy to a particular criterion. From this perspective, the answer to whether MBA programs are relevant will drastically differ depending on the criteria used to gauge such relevancy. In light of the various criteria that can be used to assess relevancy, a careful examination of recent criticism reveals a substantial lack of consensus regarding what is actually irrelevant or relevant about contemporary management education.

To be sure, passionate arguments regarding relevancy have certainly been proffered on all sides of the debate. However, the sources used to bolster much of this debate often offer equivocal and even contradictory conclusions. For example, corporate recruiters routinely assert that MBA programs could be more relevant by doing more to inculcate "soft skills" such as leadership, communication, and interpersonal skills (Eberhardt, McGee, & Moser, 1997; GMAC, 2006). Thus, recruiters place significant value upon the acquisition of people-focused managerial capabilities. However, recruiters' actions deliver a different message as they tend to make selection decisions based on the possession of technical skills (Rynes, Trank, Lawson, & Ilies, 2003). Complicating matters, research also shows that students increasingly harbor negative attitudes toward learning such soft skills (Rynes et al., 2003). Here, students purport that MBA programs could be more relevant by disposing of anything that is not perceived as "useful" in gaining employment. Even academics themselves add to the lack of consensus regarding relevancy, with some articulating enhanced relevancy through increased behavioral science or evidence-based curricula (e.g., Rousseau, 2006; Rynes & Trank, 1999), while others argue for a significant departure from the science-based curriculum approach (e.g., Bennis & O'Toole, 2005).

To move beyond the confusion that surrounds issues of relevancy in management education, a more fruitful criterion and systematic investigation are necessary. One such criterion by which the relevancy of management education can be assessed comes from the most basic element of any learning context; namely, the topical content delivered in MBA programs. Using such a criterion to then investigate the extent to which this trained content aligns with the work that is requisite to "real-life" managerial roles allows for a more systematic and generalizable assessment of relevancy. In other words, any determination of MBA

relevancy as a training ground for managerial work requires establishing a priori a thorough understanding of the nature of contemporary managerial work and its associated requirements. Toward this end, we discuss next a recent comprehensive study of contemporary managerial roles. Drawing upon the findings of this research, we then describe our study, in which we specifically sought to examine various aspects of relevancy with respect to the curricula in graduate management education.

Competencies Required by Managerial Work

The fundamental first step in evaluating the relevancy of any development domain is a thorough assessment of developmental needs or requirements (Noe, 2006). When focused on performing a job, such requirements are often described as "competencies" and encompass requisite knowledge, skills, abilities, and behaviors (Brannick, Levine, & Morgeson, 2007; Schippmann et al., 2000). Suggestions of required managerial competencies have been proffered for decades (e.g., Borman & Brush, 1993; Flannagan, 1951; Luthans & Lockwood, 1984; Tett, Guterman, Bleier, & Murphy, 2000; Tornow & Pinto, 1976). Building on this historical work, Dierdorff and colleagues (Dierdorff & Rubin, 2006; Dierdorff, Rubin, & Morgeson, in press) derived a comprehensive managerial competency model using nationally representative data from 8,633 incumbents across 52 managerial occupations. Source information for these managerial occupations was contained in the U.S. Department of Labor's Occupational Information Network (O*NET).[1]

Briefly, O*NET data are organized around a content model comprised of six major areas: worker characteristics, worker requirements, experience requirements, occupation requirements, occupational characteristics, and occupation-specific information (Mumford & Peterson, 1999). Thus, *competencies* are conceptualized in terms of the activities and personal attributes associated with performing specific occupations (Brannick et al., 2007). Important to note, similarities in these competencies enable individual jobs to be meaningfully combined in occupational groupings (e.g., purchasing managers) that share a common overall goal or purpose (Dierdorff & Morgeson, 2007). Since this content model enables a focus on the actual requirements of managerial work, it provides a basis on which to derive the training needs of aspiring managers from currently practicing managers. In addition, by using actual managers for the derivation of important competencies to be incorporated into management training, business schools can greatly enhance the link to the "real world" and demonstrate primary evidence of relevancy.

Of particular salience to the present research, Dierdorff and Rubin (2006) examined descriptors of competencies known as *generalized work activities* (Dierdorff & Rubin, 2007; Dierdorff et al., in press; Jeanneret, Borman, Kubisiak, & Hanson, 1999). These broad activities represent managerial responsibilities that incorporate several highly related behaviors used in accomplishing major work goals such as "communicating with supervisors, peers or subordinates," "staffing organizational units," and "analyzing data or information." Factor analyzing the 41 generalized work activities contained in O*NET across 52 managerial occupations, Dierdorff and Rubin (2006) empirically derived six distinct behavioral competencies that best describe the essential behavioral requirements for all managers (see Table 1). That is, these six behavioral competencies can be regarded as underlying the enactment of any managerial occupation, whether it is financial managers, construction managers, hotel managers, computer information systems managers, or so forth.

Although the six behavioral competencies are essential to managerial work in general, they are not equivalent in their importance to fulfilling the responsibilities associated with management. For example, Dierdorff and Rubin (2006) found that the behavioral competencies of *managing decision-making processes* and *managing human capital* had significantly higher mean importance than all other behavioral compe-

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[1] O*NET is a comprehensive database of occupational information, and replaces the 70-year-old *Dictionary of Occupational Titles* (Dye & Silver, 1999). O*NET data are representative of the national labor force and are collected using a staged sampling process. First, the broad business environment in which a target occupation resides is examined to determine the types of establishments (organizations) that employ occupational incumbents, the different sizes of such establishments, and how many individuals are employed in the target occupation within the U.S. labor market (via estimates from the U.S. Bureau of Labor Statistics). Next, a statistically random sample of organizations expected to employ workers in targeted occupations is identified. These organizations are then contacted to verify employment of occupational incumbents. The number of randomly selected individuals from a given establishment is based upon the proportion of incumbents in the labor market that work at such establishments. Thus, the sampling procedures employed (i.e., stratified random sampling at three separate stages) greatly minimize any systematic company-specific influences and make the O*NET data quite robust, representative, and generalizable.

TABLE 1
Empirically Derived Model of Managerial Behavioral Competencies

Competency Category	Examples
Managing Decision-Making Processes	Getting Information; Judging the Qualities of Things, Services, or People
Managing Human Capital	Coaching & Developing Others; Resolving Conflicts & Negotiating with Others; Developing & Building Teams
Managing Strategy & Innovation	Thinking Creatively; Developing Objectives & Strategies; Provide Consultation & Advice to Others
Managing the Task Environment	Communicating with Persons Outside Org.; Establishing & Maintaining Interpersonal Relationships; Selling or Influencing Others
Managing Administration & Control	Evaluating Information to Determine Compliance with Standards; Documenting or Recording Information; Performing Administration Activities
Managing Logistics & Technology	Inspecting Equipment, Structures, or Material; Controlling Machines & Processes; Interacting with Computers

Source: Adapted from Dierdorff & Rubin, 2006, ***Toward a comprehensive empirical model of managerial competencies***. Technical report presented to the MERInstitute of the Graduate Management Admission Council, McLean, VA.

tency requirements ($p < .01$), but were not significantly different from one another. *Managing logistics and technology* had significantly lower mean importance than all other behavioral competency requirements ($p < .01$). Mean importance differences were not significant ($p > .05$) among *managing administration and control*, *managing strategy and innovation*, and *managing the task environment*. Overall then, "real-world" managers indicate that *managing decision-making processes* and *managing human capital* are the most salient behavioral competencies needed to fulfilling their managerial roles, whereas *managing logistics and technology*, while essential, is the least salient.

EXAMINING RELEVANCY VIA MANAGERIAL COMPETENCIES

Using Dierdorff and Rubin's (2006) work describing behavioral competencies essential to managerial work as an *empirical* benchmark, we sought to examine the degree to which MBA programs demonstrate relevancy through their required curricula offerings. In Pfeffer and Fong's (2002) critique, they lament:

> [W]hat is unique is the degree of separation that differentiates business from other professional schools—differences in terms of . . . the extent to which curricula in the various professions are or are not linked to the concerns of the profession and directly oriented toward preparing the students to practice that profession (89).

Put simply, Pfeffer and Fong contend that the link between what managers need most to be success-ful (i.e., "the concerns of the profession") is greatly removed from the curricula designed to inculcate managerial capabilities. As noted earlier, answers to questions of relevancy may differ drastically when examined from different perspectives. Using the perspective of practicing managers regarding what is required to perform their work, we sought here to empirically investigate the linkage or alignment between required behavioral competencies and required course content in MBA curricula. Hence, the behavioral competencies serve as key, evidence-based criteria against which assertions of curricular relevancy can be systematically evaluated.

Although there are many ways to explore the linkage between management education and managerial competencies, the approach of the current study offers several advantages. First, if the primary intent of an MBA program is to develop future managers (or strengthen current managers' capabilities), then the required curricula of such programs should represent an institution's best attempt to capture the most essential content relevant to managerial work. Second, an MBA program's required curriculum communicates the value, whether perceived or objective, of particular topical content. As such, when a program requires certain courses it stands to reason that the business school views such content as mission-critical for developing managers. Third, making a determination of relevancy based upon these required courses represents a systematic and standardized method allowing for comparisons across different academic institutions. In short, by examining the linkage between required curricula and established competencies, we were guided by the broad question: "*To what extent are required MBA curric-*

ula aligned with required behavioral competencies? That is, how relevant are MBA curricula?"[2]

It is important to note that inherent to our approach is the assumption that MBA programs are designed, in whole or part, to train students for future roles as managers. That is not to say that all students immediately assume managerial roles upon conferral of the degree; but rather that MBA curricula are intended to prepare students for these roles at some point in the future. Certainly exceptions exist, but by and large, MBA programs in the United States have been established to train a professional class of managers much in the way that medical schools and law schools train groups of professionals (Khurana, 2007). Although such a goal has not been wholly attained, data suggest that large numbers of MBA graduates do assume formal managerial roles and many others engage in significant managerial activities. For example, a recent survey of 2,060 graduates showed only 28% of graduates reported not fulfilling a "manager or supervisor" role in their current organization (GMAC, 2004). Similarly, surveys of alumni cohorts across seven graduation years ($n = 2,470$) found that 35–64% of alumni managed at least one direct report (GMAC, 2007a). Moreover, employers report that of the graduates they hire, between 68% and 91% (depending upon the industry) will be placed into "midlevel" or "senior-level" positions (GMAC, 2007b). These data strongly suggest that MBA graduates regularly assume formal managerial positions and those that do not are working in sufficiently high levels in organizations that their engagement in management-related requirements is high (e.g., project management or team leadership).

Institutional Factors and Relevancy

Any exploration of curricular relevancy would be incomplete without the consideration of salient program-level factors that potentially exert influence on curriculum design. Presumably, curricula are designed not only toward employability and future vocational concerns, but also with respect to an institution's unique mission and strategy (Se-

gev, Raveh, & Farjoun, 1999). Central to these concerns is an institution or program's reputation in the marketplace. Although highly imperfect and notably critiqued, no other reputation indicator has attracted more attention than that of media rankings (Morgeson & Nahrgang, 2008). Rankings are an integral factor in business school policy making and are known to drive considerable shifts in curricula design (Elsbach & Kramer, 1996; Gioia & Corley, 2002; Morgeson & Nahrgang, 2008). Perhaps this is due to the external perception of rankings, which follows a rather logical notion; namely, that highly ranked schools offer more relevant curricula and are more closely aligned with the needs of practicing managers. As Gioia and Corley (2002) note, when a program falls in the rankings, intuitions typically respond with some alteration to their curricula in order to address managerial issues perceived as more current or pressing. With this in mind, we explored whether highly ranked MBA programs were more likely to offer relevant curricula when compared to their unranked counterparts.

As business schools pursue their own unique mission, they attempt to leverage their particular institutional capital to distinguish themselves from other programs. Accordingly, multiple factors beyond rankings could play a significant role in the relevancy of curricula. Of particular importance when studying relevancy is an exploration of a schools' purported mission. A school's espoused mission is supposed to represent more than a statement of optimistic intentions. Rather, a mission is the foundation for designing, delivering, assessing, and justifying a school's curriculum to critical accreditation bodies such as the Association to Advance Collegiate Schools of Business (AACSB; Thompson, 2004). For example, when an institution's mission places emphasis on intellectual contributions, the school of business is likely to focus its administrative and faculty energy on supporting and pursuing research activities over practice; subsequently delivering required curriculum reflecting faculty's research domains and agendas. Given the importance of a school's mission, we examined data that would capture the potential influence of mission on the relevancy of its curriculum. Finally, although more distally related to curricula, we also sought to ensure that other institutional factors did not play some role in potential findings of curricula differences. Thus, we examined institutional data such as the degree of urbanization (urban, suburban, or rural), Carnegie classifications, and institutional control (public or private).

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[2] In the present study we do not explore the effectiveness of teaching interventions for inculcating various knowledge and skills, capture changes in students/learners, or examine broad external indicators of business school success such as placement rates, starting salaries, or career progression. These types of studies are desperately needed; however, they are subsequent to concerns about topical content. That is, curricula represent *inputs* into the educational process, whereas teaching methodologies and student outcomes represent *throughputs* and *outputs,* respectively.

TABLE 2
Examples of Classified MBA Courses

Competency Category	Classified Course Examples
Managing Decision-Making Processes	Managerial Decision Analysis; Decision Models; Applied Statistical Analysis; Managerial Statistics; Quantitative Methods
Managing Human Capital	Organizational Behavior; Human Resource Management; Leadership Dynamics; Organizational Theory; Negotiation; Managerial Effectiveness
Managing Strategy & Innovation	Strategic Planning; Strategy Implementation; Strategic Analysis; Competitive and Corporate Strategy
Managing the Task Environment	Marketing Management; Managerial Economics; Macroeconomic Policy; Globalization of Business; International Economics
Managing Administration & Control	Managerial Accounting; Financial Analysis; Contemporary Business Law; Corporate Finance; Business Policy; Cost Analysis
Managing Logistics & Technology	Operations and Supply Chain Management; Management Information Systems; Production and Operations Management; Operations Management

METHOD

Sample, Measures, and Procedure

Study data were derived from three primary sources: (1) managerial competency information documented in the source report described above (i.e., Dierdorff & Rubin, 2006); (2) institutional data obtained directly from AACSB data services; and, (3) MBA course requirement information from AACSB-accredited programs as described below.

MBA Course Requirements

These data were captured during the autumn of 2006 using the following sequential steps. First, a listing of all schools of business accredited by the AACSB was obtained from the association's website. This listing contained 438 different U.S. colleges and universities. Second, websites of each school were searched for course requirement information pertaining to completing an MBA. Schools that did not offer the MBA degree were excluded. Third, required courses for an MBA degree were recorded for each school. A required course was one that is mandatory for all MBA candidates. Although schools of business offer many electives and special topics courses, the current study relied on required courses, as they are arguably deemed the most essential by the target school (i.e., so important that students must complete them or show evidence of completing them). After excluding schools without MBA offerings and those for which course requirements were unavailable on school websites, course requirements were collected for a total of 373 schools (85% of all AACSB-accredited schools).

Classification Procedure

To assess the extent of alignment between MBA course requirements and the required managerial competencies, courses were classified in relation to six "competency categories." These categories were defined by the six behavioral competencies from Dierdorff and Rubin (2006) and Dierdorff et al. (in press): *managing human capital*; *managing logistics and technology*; *managing decision-making processes*; *managing administration and control*; *managing strategy and innovation*; and *managing the task environment*. Two independent reviewers (one was the study's first author) conducted a multistep classification procedure. First, definitions for each of the six competency categories provided by Dierdorff and Rubin (2006) were reviewed. Second, a required course's title and description were consulted to ascertain its primary topical content. Primary topical content was defined as a course's essential or core subject matter (e.g., leadership courses primarily teach leadership). Third, using primary topical content and competency definitions, courses were matched to the most appropriate competency (see Table 2 for classification examples). Following this procedure, a total of 3,594 courses were independently reviewed and classified with 92% absolute agreement. In cases of disagreement, the study's second author was consulted to reach consensus.

It should be noted that the above classification procedure did not require every single course to be classified to a competency. When the primary topical content was unclear, a course was flagged as "not elsewhere classified." Such classifications represented a very small percentage of courses (5%). Further, the classification procedure allowed for each course to be classified to only a single competency. This procedure could obscure idiosyncratic differences in content due to instructor and/or misspecify courses where a true integration of multidisciplinary subject matter is being taught. Since classroom observation was not undertaken for all 3,594 courses, the present procedure's focus

on a course's primary topical content ensured the capture of systematic and *identifiable* course content differences.

Program and Institutional Factors

We assessed six variables related to institutional characteristics. The first was whether each business school in the sample was ranked among the *BusinessWeek* "top-30" MBA programs during 2006. To avoid the large discrepancy in sample sizes between the categories of this variable (i.e., 30 top-ranked schools as compared to the over 340 other schools in the sample), we generated two random samples from schools that were not ranked in the "top 30." Each of these comparison samples was comprised of 30 schools, and selected schools in either sample were not duplicated.

We further captured the "Carnegie Classification" of each institution. Based on the types of institutions in our sample, this variable was comprised of three categories. The first category was Doctoral/Research Universities—Extensive ($n = 126$). The second category was Doctoral/Research Universities—Intensive ($n = 71$). The third category was Master's Colleges and Universities ($n = 165$), which combined both level I and II designations ($n = 161$ for level I, and $n = 4$ for level II).

Additional variables were derived from AACSB knowledge services data and assessed different self-reported mission "orientations" of business schools. The AACSB asks schools to indicate the level of different orientations in terms of high, medium, and low "emphasis" with regard to their missions. We operationalized each school's "general orientation" by recording the response that was listed as receiving the "highest emphasis" by a given school. Based on the schools in our sample, general orientation was comprised of three categories: teaching ($n = 167$); intellectual contributions ($n = 47$); and, equally oriented ($n = 124$). We similarly operationalized a school's "scholarly orientation" using the response receiving the "highest emphasis." Based on the responding schools in our sample, scholarly orientation was comprised of three categories: contributions to practice ($n = 99$), defined by the AACSB as the application, transfer, and interpretation of knowledge to improve management practice and teaching; discipline-based scholarship ($n = 118$), defined by the AACSB as simply the creation of new knowledge; and, equally oriented ($n = 114$). Finally, we derived from the AACSB data variables of institutional control (public or private) and degree of urbanization (urban, suburban, or rural). Of the schools in our sample, 112 were classified private and 261 as

TABLE 3
Percentages of Competency Category Coverage Across Schools

Competency Category	Avg. Within School % of Curriculum Coverage[a]	*SD* of Avg. %	% Coverage Benchmark[b]
Managing Decision-Making Processes	9.63	8.04	19.66
Managing Human Capital	12.98	7.03	19.01
Managing Strategy & Innovation	8.87	7.75	17.14
Managing the Task Environment	21.11	9.01	17.02
Managing Administration & Control	26.99	9.31	16.55
Managing Logistics & Technology	15.44	8.59	10.61

[a] Total curriculum coverage sums to 95.02% as the remaining 4.98% of the courses were not clearly classified and coded as "not elsewhere classified."

[b] Benchmark percentages were calculated using importance scores derived from incumbent managers for each competency.

public. In terms of urbanization, 162 responding schools were classified as urban, 110 as suburban, and 67 as rural.

RESULTS

As a first step toward exploring our research question regarding MBA curricula alignment with behavioral competencies of managerial work, we calculated the percentage of required courses that fell into each competency category for each of the 373 schools. These percentages were then cumulated across all 373 schools. Results from this examination are shown in Table 3. As can be seen in the table, the competency category of *managing administration and control* received the largest proportion of treatment among requisite courses in MBA programs, followed by *managing the task environment*. These two competencies also displayed the largest variance in the percentage of required courses. *Managing human capital* and *managing logistics and technology* received comparably less treatment, while *managing decision-making processes* and *managing strategy and innovation* had the lowest coverage. Except for *managing decision-making processes* and *managing strategy and innovation*, all estimates of average coverage percentage were significantly different from one another ($p < .01$).

Also shown in Table 3 are proportional estimates calculated using the relative importance of each competency as indicated by actual incumbent
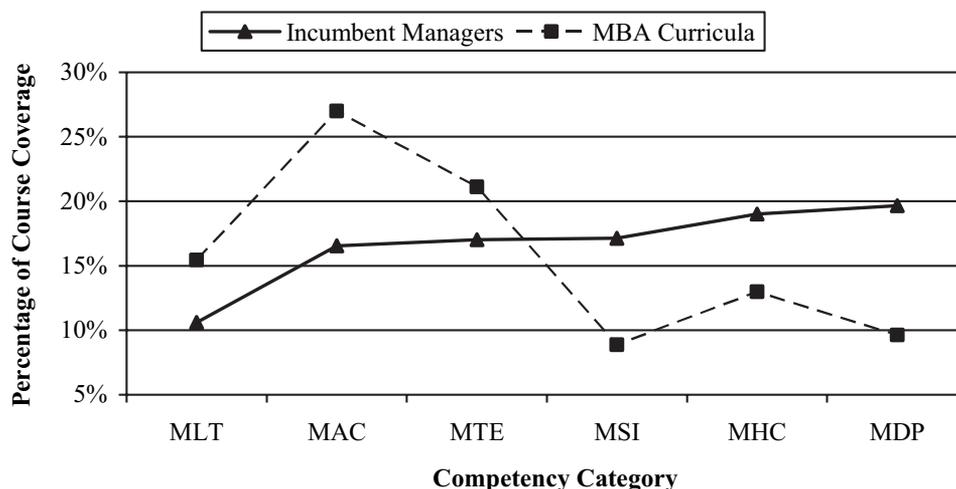
FIGURE 1

Pattern of Curricular Alignment. MDP = Managing Decision-Making Processes; MHC = Managing Human Capital; MSI = Managing Strategy & Innovation; MTE = Managing the Task Environment; MAC = Managing Administration & Control; MLT = Managing Logistics & Technology.

managers (reported in Dierdorff & Rubin, 2006). These estimates were used as benchmarks upon which to compare the relevancy of required curriculum offerings and reflect the differential importance of each competency to performing managerial work. When comparing percentages of competency coverage to this benchmark, there appears to be a considerable mismatch between the levels of importance incumbent managers assign to these competencies and the degree to which these same competencies are covered by the essential courses that are required on average by MBA programs. For example, incumbent managers place the highest and second highest importance on *managing decision-making processes* and *managing human capital*, whereas these competencies ranked fourth and fifth in terms of required course coverage in MBA curriculum. In addition, incumbent managers indicate *managing logistics and technology* to be the least important competency in

performing their work, while at the same time this competency received the third most treatment by required MBA courses. Figure 1 displays the pattern of the data presented in Table 3.

Table 4 presents the average percentages of schools offering zero, one, more than two, or more than three courses in each competency category. These results indicate that the vast majority of schools have at least a single required course treating each competency category. However, there were noticeably higher percentages of schools offering no required MBA courses for *managing decision-making processes* (28.69%) and *managing strategy and innovation* (31.37%). In comparison, only 2% of schools did not offer a single required MBA course for *managing administration and control*. Important to note is that the competency-to-course correspondence dropped substantially for 4 of the 6 competency categories when examining percentages of schools offering more than a single course aligned

TABLE 4
Course Offerings by Competency Category

Competency Category	Competency Coverage[a]			
	No Courses	Only 1 Course	2 or More Courses	3 or More Courses
Managing Decision-Making Processes	28.69	52.28	19.03	3.49
Managing Human Capital	6.43	64.88	28.69	2.41
Managing Strategy & Innovation	31.37	55.50	13.14	1.88
Managing the Task Environment	4.02	26.27	69.71	27.08
Managing Administration & Control	2.14	10.99	86.86	47.99
Managing Logistics & Technology	13.94	41.29	44.77	6.17

[a] Column values represent the percentage of schools offering courses in each competency category.

to each competency category. Such declines in multicourse treatment appeared greatest for *managing human capital*, *managing decision-making processes*, and *managing strategy and innovation*.

To investigate whether the alignment of required coursework to managerial competencies is impacted by program or institutional factors, we examined course coverage profiles in relation to behavioral competency importance. This was accomplished by first calculating Euclidean distance-squared estimates (D^2) between the course coverage percentages for each school and the relative importance of each competency as indicated by incumbent managers. Thus, for each school, a D^2 estimate was computed between the school's vector (profile) of six course coverage percentage scores and the referent vector of six standardized importance scores for the behavioral competencies (right-hand column of Table 3). These D^2 estimates represented the degree to which a school's curriculum coverage across the six behavioral competencies was "distant" (or misaligned) in direct relation to how important incumbent managers rated the six competencies. Second, we entered the D^2 estimates as dependent variables in six separate ANOVA. The independent variables in these ANOVA were the categorical variables corresponding to each program or institutional factor (e.g., Carnegie Classification).

The first ANOVA tested for differences in alignment profiles between ranked and unranked schools. We drew two random comparison samples from the unranked schools. No significant effects were found in either ANOVA for ranked versus unranked schools ($F = 2.36$ and 2.43, $df = 1$, $p > .10$ for samples 1 and 2, respectively). The second ANOVA examined Carnegie Classification and showed significant overall effects ($F = 4.78$, $df = 2$, $p < .05$). In terms of specific mean differences between Carnegie Classification categories, only a single significant difference was found. This difference was between the Doctoral/Research Universities—Extensive and the Master's Colleges and Universities categories ($p < .05$), with the latter category being more distant (misaligned) than the former.

In terms of the self-reported mission orientations, neither general orientation (teaching, intellectual contribution, or equal) nor scholarly orientation (contributions to practice, discipline-based scholarship, or equal) showed significant effects on alignment profiles. However, the effect for general orientation approached significance ($F = 2.88$, $df = 2$, $p = .06$) with schools indicating intellectual contribution as their general orientation being slightly less distant (more aligned) than those in-

dicating teaching or equal orientations. Nonetheless, these differences should be interpreted with caution.

Finally, we conducted ANOVA testing the effects of institutional control (public or private) and degree of urbanization (urban, suburban, or rural). The effects of institutional control were nonsignificant ($F = .01$, $df = 1$, $p > .05$) showing no differences between public and private intuitions in terms of alignment profiles. Similarly, no statistically significant effects were found for degree of urbanization ($F = .28$, $df = 2$, $p > .05$).

DISCUSSION

In light of mounting criticisms of the relevancy of management education, we sought to more fully and systematically examine the nature of MBA relevancy. Relying on recent and expansive empirical work deriving a comprehensive model of managerial competencies, we assessed the extent to which required course content in MBA programs is indeed aligned with the essential behavioral competencies needed to perform managerial work. In this sense, we evaluate "relevancy" using an evidence-based approach by examining the content that is trained in MBA programs and what is actually required by contemporary managerial occupations.

Analyzing data from the 373 schools of business, large majorities (71–98% depending on the competency) of MBA programs require courses that cover one of each of the six behavioral competencies, and many programs offer multiple courses that train to a particular competency. This breadth of coverage should not be surprising, since our method guaranteed that competencies would relate to courses. That is, we assigned courses to competencies based on their primary topical content but restricted the exploration of relevant competencies to only those specifically related to managerial work. Because MBA programs are founded on the notion that they train future managers, overlap between managerial competencies and the coursework dedicated to inculcate such competencies should be present. Thus, while our results suggest at least minimal relevance, overlap between competencies and courses is not itself a sufficient indicator of content relevance.

Although our method ensured some overlap between competencies and courses, it did not dictate how much emphasis would be given to each competency within a particular MBA program (i.e., the number of courses training to a given competency as its primary topical content area). This focus on emphasis was the central question of our study. A

closer within-school examination reveals some interesting patterns in this respect. For example, comparisons of course coverage show that on average most curricular emphasis is given to *managing administration and control*, *managing the task environment* and *managing logistics and technology*, whereas the least emphasis is given to *managing strategy and innovation*, *managing decision-making processes* and *managing human capital*. The striking implication from these findings is that the extent to which each competency receives curriculum coverage does not necessarily match the degree to which incumbent managers actually judge each competency's criticality. That is, while all six behavioral competencies are required to perform managerial work, the very competencies that are most significant to performing managerial work are given the least required course coverage in MBA curricula (see Figure 1).

More specifically, incumbent managers rate *managing human capital* and *managing decision-making processes* to be the most important behavioral competencies of all their managerial work, yet results show that these competencies are not given proportional "space" within most MBA programs' required coursework. Although a high preponderance of schools require at least one course devoted to primary topical content relating to *managing human capital* (93.57%) and *managing decision-making processes* (71.31%), the percentage of schools offering at least two courses drops dramatically (28.69% and 19.03%, respectively), especially when one compares these estimates to schools offering at least two courses in other competency areas such as *managing administration and control* (86.86%) or *managing the task environment* (69.71%).

In regard to these findings, it should be noted that anecdotes abound regarding the vast availability of people-focused and decision-making content by way of elective or specialized courses within MBA curricula. Here again, schools communicate what is most essential to the training of managers by requiring certain courses over others that all students must complete to be conferred the degree of MBA. What should logically follow, however, is that such required coursework should indeed reflect managerial reality in terms of the behavioral competencies that are most important. Unfortunately, as others have noted (Rynes et al., 2003), there may be significant institutional, social, economic, and political reasons for the misalignment of MBA content with actual managerial work. To address some of these potential influences, we also examined factors that may differentiate the type of curriculum offered and its alignment with managerial competencies.

One such potential influence is that of media rankings, which have been said to influence curriculum design and policy decisions (Morgeson & Nahrgang, 2008). Conventional wisdom holds that more highly ranked programs enjoy such status due in part to their more timely or relevant content offerings (i.e., they are more in touch with the real world). Contrary to such thinking, the findings of the present study indicate that MBA programs ranked in *BusinessWeek's* top 30 were no more likely to require relevant coursework than multiple randomly sampled comparison groups. Stated another way, unranked programs appear to require coursework that is equally content relevant (or irrelevant) as the "top 30." It is important to note that this finding by no means negates the substantial external benefits conferred upon students who attend highly ranked programs. Indeed, pedigree has been cited as a key factor in increased student outcomes such as higher starting salaries and preferred placements (Pfeffer & Fong, 2002). Thus, while the outcomes for students attending a top-30 program are many and significant, matriculation in the top 30 by no means guarantees exposure to more managerially relevant curricula. Put simply, media rank alone cannot be used as a proxy for content relevancy in MBA training.

Although rank does not seem to differentiate the content relevancy of curricula, the present study shows that to some extent Carnegie Classification does. The Carnegie Classification system captures meaningful differences among educational institutions with respect to their overall research support and activity (Carnegie Foundation, 2006). As such, the classification system can be used as a surrogate for the overall environment in which MBA programs are housed. The present findings show that MBA programs housed in "doctoral/research universities–extensive" institutions are more likely to offer more relevant coursework when compared to their "master's only" counterparts. This finding diverges from recent critics (Bennis & O'Toole, 2005) who associate higher levels of research activity with the delivery of irrelevant content. On the contrary, the present results suggest that the relevant management training grounds are likely to be found in institutions of elevated research activity rather than in institutions where research is deemphasized and less supported. The results, however, show no differences for MBA programs who report that they emphasize research over teaching. In this sense, a program's espoused orientation does not seem to differentiate content relevance, whereas the more external Carnegie Classification does.

Implications for MBA Training

Taken collectively, our findings suggest that when defining relevancy in terms of the requirements of managerial work, MBA programs accomplish much of what they set out to do, namely, to deliver content relevant to general managers. As such, there is heavy curricular emphasis on the primary functions of business and their related behavioral competencies (e.g., *managing administration and control*). When asked how well business schools prepare their students, Peter Drucker once remarked:

> The question . . . should perhaps focus on the extent to which we enable students to "get going." In this respect, I believe that business schools prepare students very well. They give students functional skills that enable them to earn their keep very quickly, if very narrowly (cited in Chapman, 2001: 13).

The present results support Drucker's assertion and are reflected in the value MBA graduates communicate about their degree. Indeed, despite the recent flood of criticism, graduates continue to indicate that their decision to pursue the MBA was the right one. For example, in a recent survey of 2,828 post-MBA graduates, 94% responded favorably when asked whether they would pursue the degree today knowing what they now know about MBA programs (GMAC, 2006).

All of this is not to say that MBA programs are perfect or above reform for that matter. To the contrary, our results show significant gaps between what is most critically required for managerial work and the required coursework for conferring MBA degrees. If MBA programs are truly concerned with being relevant and want to make an immediate impact on the development of future managers, they might be well served to build greater alignment between required curriculum and requisite managerial responsibilities. Along these lines, it is also important to note that perceptions of the usefulness of training with regard to actual job requirements are known to be strongly associated with higher levels of learner motivation in developmental settings (Colquitt, LePine, & Noe, 2000). Thus, improving alignment not only stands to increase the relevancy of curricula but also carries the added benefit of improved student motivation to learn. From the current findings, building greater alignment would most certainly involve an increase in the proportion of people-focused and decision-making curricular content that is required relative to other content. Such an assertion is sup-

ported by results showing significant misalignment between required MBA curricula and the behavioral competencies of *managing human capital* and *managing decision-making processes*.

The general paucity of required coursework dealing with *managing human capital* also lends a significant amount of credibility to what Trank and Rynes (2003) termed a "legitimacy crisis" in management education. By specifically requiring certain course content for future managers, MBA programs directly communicate both the importance and value of particular managerial capabilities. Therefore, the relative lack of required courses for this people-focused competency across 373 MBA programs could indicate a particular devaluing of such capabilities by curricula decision makers including faculty, deans, and program directors.

Compounding this misalignment is evidence that students harbor general disdain for people-focused coursework and that these reactions can also drive policy decisions regarding curricula (Rynes et al., 2003). As Rynes and colleagues note, the devaluing of people-oriented coursework "seems puzzling when juxtaposed against statements by CEOs and recruiters about the characteristics organizations are looking for in graduating students" (2003: 270). In light of Rynes et al. (2003), our results suggest that with respect to designing a more relevant MBA the customer is not "always right" and that coursework related to *managing human capital* is in fact more important to managerial reality than students may want to believe. To be fair, teaching students to manage people is no easy task and certainly does not lend itself solely to traditional classroom experiences. Nonetheless, there is plenty to be learned in the traditional classroom that can build foundations for nontraditional experiences.

Similar to the problems associated with the general lack of people-focused courses is a concern regarding the relatively low curricular representation of the *managing decision-making processes* competency, deemed the most critical competency by incumbent managers alongside *managing human capital*. This competency category involves specific activities surrounding gathering and interpreting information to arrive at a particular judgment. More specifically, *managing decision-making processes* focuses squarely on curriculum content related to statistics, applied research, and data or decision analysis, and should not be confused with discipline-based decision activities (e.g., accounting rules). That is to say, this competency category is "content-free" and represents the *process* of how a manager makes or arrives at decisions rather than the specific content of those

decisions. Despite its criticality among the essential managerial competencies, MBA curricula on average tend to ignore this competency altogether, with over 25% of schools requiring no courses and half requiring only a single course. In fact, we found that roughly 9% of all required MBA curriculum is given proportionally to *managing decision-making processes*.

When one considers the recent developments in the formation of an evidence-based management movement, the lack of courses related to this competency may derive particular importance. Evidence-based management relies heavily on managers' capabilities not only in interpreting data, but in learning how to judge the quality of research from both academics and from a barrage of external consultants (Pfeffer & Sutton, 2006; Rousseau, 2006). These capabilities could be more fully integrated into MBA curricula (see Rousseau & McCarthy, 2007). Further, research continues to document the fact that there are wide gaps between what is known from empirical management research about effective management practices and the beliefs of practitioners (Rynes, Giluk, & Brown, 2007). Indeed, even the harshest critics of MBA programs acknowledge that students desperately need "help in understanding how to interpret facts" and "making decisions in the absence of clear facts" (Bennis & O'Toole, 2005: 101).

Congruent with evidence-based management, our results suggest that attempts to bolster content related to the management of *decision-making processes* would significantly increase the relevancy of management education. Unfortunately, much like the coursework that focuses on *managing human capital*, disciplines associated with imparting statistics and applied research are apparently suffering from their own legitimacy crisis (McAlevey & Everett, 2003; Stray, Naude, Wegner, 1994), even in the most historically quantitatively oriented programs. As recent reports imply (e.g., Fisher, 2007), the apparent approach among programs is to cover either *managing human capital* (so-called soft competencies) or *managing decision-making process* (so-called hard competencies). The present results suggest that to be most relevant to contemporary management, MBA curricula would emphasize *both* competency areas, comprising close to 40% of the required curriculum. Such a change would certainly be dramatic, representing a 100% increase over their total current required curricular representation (on average, about 20%).

While students may express disdain for such courses while enrolled, upon graduating they tend to report significant satisfaction and deem these courses among the top-three most valuable topical areas within the curricula (GMAC, 2007a). Further, once in the workforce for some time and presumably faced with the difficult realities involved in managing others or maintaining their interpersonal relationships, they express considerable interest in further development opportunities related to *managing human capital*. Indeed, in a recent survey of 6,125 MBA graduates spanning 2000 to 2006, 85% of alumni reported feeling a need for additional management education. Ranking their areas for development, these alumni (1/3 of whom had only been in the workforce for 2 years) endorsed *managing human capital*, *managing decision-making processes* and *managing strategy and innovation* (GMAC, 2007a)—the very behavioral competencies deemed as most important by incumbent managers—as the top-three most critical areas for their current developmental needs.

Moreover, *managing decision-making processes* was reported as the requirement most enacted and also the most in need of additional training. This finding held regardless of the functional areas in which these MBA alumni were working, including marketing/sales, operations/logistics, consulting, general management, finance/accounting, human resources, and information technology/management information systems (GMAC, 2007a). If MBA programs are listening to student preferences prior to their enrollment to help shape curricula, they might by the same token benefit from listening postgraduation. The challenge for business schools is to encourage students and other stakeholders such as recruiters to adopt a slightly longer range view of training and selecting graduates. Although organizations and students incur tremendous short-term benefits from the current misalignment favoring functional requirements, the survey data above clearly illuminate the long-term consequences of doing so; graduates lack considerable exposure to the most important requirements they are ultimately asked to enact.

Yet, some trends in curricula design may actually continue to propel programs farther away from making the necessary proportional adjustments to offer managerially relevant curricula. One particular trend that has been observed is the movement toward reducing the number of required courses in efforts to court students through promises of program flexibility and choice.[3] To explore the potential implications of this trend we examined the relationship between number of required courses offered and a program's relevancy profile score

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[3] We are grateful to an anonymous reviewer for observations prompting these additional post-hoc analyses.

TABLE 5
Course Offerings Above and Below the Required Course Mean

Competency Category	Programs Offering No Courses (%)		
	Above Mean	Below Mean	Difference[a]
Managing Decision-Making Processes	11.66	41.90	30.24
Managing Human Capital	1.84	10.47	8.63
Managing Strategy & Innovation	17.79	41.90	24.11
Managing the Task Environment	1.0	6.67	5.67
Managing Administration & Control	1.0	3.33	2.33
Managing Logistics & Technology	4.91	20.95	16.04

[a] Column values represent increases in the percentage of programs offering zero courses in each competency category.

(D^2). The mean number of required courses across all 373 programs was 9.65. The correlation between the number of courses and the D^2 estimates over the 373 schools was -.49 ($p < .01$). Thus, as programs increase their number of required courses they are more likely to have curricula profiles that are less distant (i.e., more aligned) than those who have fewer required courses.

This raises a concern regarding the types of courses that are ultimately eliminated when programs shrink their required curricula. To address this concern, we examined the percentage of programs offering *no required courses* in each competency category above and below the mean number of courses. The results of this analysis are presented in Table 5. As can be seen in the table, while 12% of programs above the mean offer no courses in *decision-making processes*, this percentage more than triples to 42% of programs below the mean. Similarly, just 18% of programs above the mean offer no courses in *strategy and innovation*, whereas 42% of programs below the mean offer no courses. Conversely, regardless of whether programs are above or below the mean, they offer roughly the same percentage of courses dedicated to *managing the task environment* (1% above vs. 7% below) and *administration and control* (1% above vs. 3% below). Thus, it seems that as programs move toward streamlining their required curricula, they do not elect to eliminate competencies rated as less important by managers (e.g., *managing administration and control*), but rather choose to abolish *managing decision-making processes*—one of the two most critical managerial requirements.

Building Relevancy Into the Curriculum

Critics have argued that the field of management education is failing because it has failed to view itself as a "profession" (Bennis & O'Toole, 2005). One way to bolster professional managerial development is through the establishment of a common body of requisite knowledge, skills, or competencies. In this sense, the current results pertaining to the overall alignment of MBA curriculum with the required behavioral competencies of managerial work could serve as a road-map for designing or redesigning curricula that support the development of the most essential managerial capabilities. As such, programs looking to establish a standard for management as a profession could rely heavily on prior empirically based competency modeling (e.g., Dierdorff & Rubin, 2006; Dierdorff et al., in press) to provide the necessary foundation of learning content that broadly applies to managerial occupations. This evidence-based approach would help policy makers ground their curriculum design choices a priori in an agreed-upon standard that can be used to differentiate the importance of certain content over other content. Likewise, this approach could be used in situ as a form of curriculum audit to verify coursework coverage of essential managerial competencies. By using an empirically derived competency model as a learning content benchmark, programs also have sufficient evidence to deflect criticisms a posteriori, emanating from internal and external pressures to incorporate more "relevant" training. Certainly, few could argue that there is more relevant content to managerial practice than what actual practicing managers articulate to be relevant.

Of course, relying solely on an existing empirical competency model is a recipe for total inclusion (i.e., everything might be deemed important). As such, some note that general models may have questionable practical use (Tett et al., 2000). It is certainly true that generality may obscure the depiction of complexity; however, when developing curricula for a general degree like the MBA, a generic model can provide a level-appropriate foundation. Also important, the behavioral competencies used here were derived from nationally representative O*NET data. These data are taxonomic in nature, and thus, can be reduced to more specific information when needed (e.g., detailed work activities, tasks, etc.). Moreover, the data within O*NET use a "common language" that permits valid comparisons across managerial occupations, such as those in financial services, healthcare, or manufacturing. In practical terms, the model employed here can be reduced to more molecular information that would be valuable for developing a focused management program

(e.g., sales management), without sacrificing or losing the connection to the more molar occupational grouping (i.e., manager). In this sense, the present study's approach builds a bridge for both researchers and policy makers wanting the benefits of general professional standards without sacrificing the practical utility necessary to create specific, customized training contexts.

Boundary Conditions and Future Directions

Although the present study possesses some significant strengths (e.g., empirically driven competency comparisons, large and representative sample of business schools, objective course data, etc.), some important boundary conditions for the findings deserve discussion. First, MBA course content data used in our analyses contained only required coursework that was publicly available by way of university websites. It is quite possible that MBA programs offer significant opportunities to train toward behavioral competencies not represented in their required courses and thus not represented in our analyses. Second, the data presented here represent content as expressed through course titles and descriptions. For our purposes, we thought it was a reasonable supposition that descriptions were indeed reflective of the intended primary topical content. Third, an important boundary condition exists in that we did not measure how the course content is ultimately delivered. Clearly, variation in the execution of a school's curriculum has considerable influence on the relevancy of training. Fourth, we rely on O*NET data which are based on the U.S. workforce. Thus, our examinations of curricula-competency alignment are limited to MBA programs based in the United States. It should be noted that many MBA programs admit high percentages of international students who will ultimately return to their native countries for employment as well as U.S. citizens who will work for global entities. Nonetheless, the generalizability of our findings outside the United States should be cautiously interpreted. Fifth, we did not allow for a single course to be associated with multiple competencies. As noted above, we focused on the primary topical content of a given course as a determinant of the associated competency. This method, while beneficial for systematic data collection and avoiding idiosyncrasies of instructor-driven content preferences, may obscure some complexity that is no doubt present in the content of some MBA required coursework.

Much additional work remains to be conducted regarding the relevancy of the MBA degree. Future research could benefit greatly by asking more complex questions about *how* the MBA is relevant or irrelevant, in what contexts or conditions, and for whom. For example, some have proposed that various sources of pressure (e.g., media ranking, students, professional associations, etc.) exert significant influence on MBA programs (Rynes & Trank, 1999; Trank & Rynes, 2003) and that particular design features (e.g., multidisciplinary, action learning, etc.) can improve management education in general (Pfeffer & Fong, 2002). Also important, any future research pertaining to MBA training necessarily requires a significant detailing of the criteria used to establish what is considered relevant. To date, extensive weight is given to criteria defined by preferences of both the primary and ultimate consumers of the MBA degree (i.e., students and organizations, respectively). Future work should consider utilizing policy-capturing techniques that would allow for researchers to understand the decision-making processes employed in the design and delivery of graduate management education. For example, future studies might explore what factors influence various stakeholder groups (e.g., students, faculty, organizations, etc.) to view curricula as relevant (or irrelevant) for developing managers. Part of such efforts would be to broaden the scope to include considerations of global context and non-U.S. business schools.

Critics of the MBA degree often argue that the training methods currently used to develop management students are inappropriate. Future research can illuminate this criticism by employing a training evaluation framework and examining the realization of intended learning outcomes (see Kraiger, Ford, & Salas, 1993). In other words, investigating questions of actual knowledge and skill acquisition, rather than other more tertiary outcomes that are frequently examined (e.g., initial salary, number of job offers, etc.), which may or may not be related to actual competencies. In fact, schools receiving accreditation from AACSB must continue to show improvement in their curricular offerings through a systematic process of learning assessment (Martell, 2007). Such a process can be accomplished alongside efforts to maximize curricular relevancy by ensuring that the competencies represented in the curricula are truly being inculcated in students and that such learning transfers to other domains such as future courses and jobs.

Finally, the present misalignment toward competencies such as *administration and control* courses calls into question the overall value of

the MBA versus other specialized MBA or master's programs designed specifically to train students for functional roles in these domains (e.g., MS in financial analysis; MS in accountancy, etc.). Perhaps the growth in specialized programs is an attempt on the part of business schools to improve alignment with the roles their graduates will immediately fulfill. Research is needed to explore whether such specializations are substantially unique from traditional MBA curricula, as well as how these programs impact the relevancy of management education.

It is important to note that the above suggestions for future research are aimed toward generating evidence-based conclusions. Pfeffer and Fong remark that "recent criticisms of business schools have seldom been confronted with much systematic evidence" (2002: 80). Following their perspective and with the above discussion of future research in mind, we strongly encourage scholars to approach the issue of MBA relevancy from an evidence-based perspective. To be sure, this perspective involves bringing the same rigorous techniques used in more disciplinary inquiry to bear on these critically important management education concerns. Whether qualitative, empirical or both, an evidence-based approach can greatly inform critiques and serve to bring an objective balance to a largely anecdotal debate.

CONCLUDING THOUGHTS

Taken collectively, we recognize that much of the above discussion carries a rather idealistic tone following an assumption that an institution's primary concern is the content of its educational offerings. Indeed, much research has detailed the intense political and economical demands placed on business schools including "turf-battles," compliance with accreditation standards, alumni management, recruiter preferences, marketplace competition, and so on (Khurana, 2007; Rynes & Trank, 1999). It is clear that schools must balance these pressures, which may not always align with educational concerns. Yet in the face of heavy criticism, MBA programs may increasingly find themselves at a relevancy crossroads in designing curricula.

Determining which criteria of relevancy institutions deem as most important is at the heart of selecting a direction to pursue, and as with most strategic choices, often comes with significant trade-offs. For example, if trends remain, institutions choosing to heavily rely on student preferences to make their programs more attractive (e.g., reducing total required courses) in the name of relevancy may actually face the unin-

tended consequences of becoming less relevant to real managerial work by underemphasizing decision-making content. Conversely, institutions driving their curriculum design choices based on actual managerial requirements may increase their "true" relevancy, all the while appearing less relevant to their primary consumers: students. Programs hoping to improve their marketplace appeal by courting high-profile companies to recruit graduates may also run the risk of increasing demands from recruiters who, while espousing the importance of human-capital requirements, select on more technically focused requirements (Rynes et al., 2003). In all, it is certain that tensions surrounding issues of relevancy will continue to impact how business schools design, implement, and evaluate their graduate management educational programs.

REFERENCES

Bennis, W. G., & O'Toole, J. 2005. How business schools lost their way. *Harvard Business Review,* 96–104.

Borman, W. W., & Brush, D. H. 1993. More progress toward a taxonomy of managerial performance requirements. *Human Performance,* 6: 1–21.

Brannick, M. T., Levine, E. L., & Morgeson, F. P. 2007. *Job analysis: Methods, research, and applications for human resource management* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Carnegie Foundation. 2006. www.carnegiefoundation.org/classifications/index.asp

Chapman, C., 2001, Nov. Taking stock. *BizEd,* 13–17.

Colquitt, J. A., LePine, J. A., & Noe, R. A. 2000. Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology,* 85: 678–707.

Dierdorff, E. C., & Morgeson, F. P. 2007. Consensus in work role requirements: The influence of discrete occupational context on role expectations. *Journal of Applied Psychology,* 92: 1228–1241.

Dierdorff, E. C., & Rubin, R. S. 2006. *Toward a comprehensive empirical model of managerial competencies.* Technical report presented to the MERInstitute of the Graduate Management Admission Council, McLean, VA.

Dierdorff, E. C., & Rubin, R. S. 2007. Carelessness and discriminability in work role requirement judgments. Influences of role ambiguity and cognitive complexity. *Personnel Psychology,* 60: 597–625.

Dierdorff, E. C., Rubin, R. S., & Morgeson, F. P. (in press). The milieu of management: An integrative framework linking work context to role requirements. *Journal of Applied Psychology.*

Dye, D., & Silver, M. 1999. The origins of O*NET. In N. G. Peterson, M. D. Mumford, W. C. Borman, P. R. Jeanneret, & E. A. Fleishman (Eds.), *An occupational information system for the 21st century: The development of O*NET:* 9–19. Washington, DC: American Psychological Association.

Eberhardt, B. J., McGee, P., & Moser, S. 1997. Business concerns regarding MBA education: Effects on recruiting. *Journal of Education for Business,* 72: 293–296.

Elsbach, K. D., & Kramer, R. M. 1996. Members' responses to organizational identity threats: Encountering and countering the BusinessWeek rankings. *Administrative Science Quarterly,* 41: 442–476.

Fisher, A. 2007. The trouble with MBAs. *Fortune,* 155: 49–50.

Flannagan, J. C. 1951. Defining the requirements of the executive's job. *Personnel,* 28: 28–35.

Ghoshal, S. 2005. Bad management theories are destroying good management practices. *Academy of Management Learning & Education,* 4: 75–91.

Gioia, D. A., & Corley, K. G. 2002. Being good versus looking good. Business school rankings and the Circean transformation from substance to image. *Academy of Management Learning & Education,* 1: 107–120.

Graduate Management Admission Council (GMAC). 2004. *MBA Alumni Perspectives Survey: Comprehensive data report.*

Graduate Management Admissions Council (GMAC). 2005. *Corporate Recruiters Survey: General report.*

Graduate Management Admission Council (GMAC). 2006. *MBA Alumni Perspectives Survey: Comprehensive data report.*

Graduate Management Admission Council (GMAC). 2007a. *MBA Alumni Perspectives survey.*

Graduate Management Admission Council (GMAC). 2007b. *Corporate Recruiters Survey: General data report.*

Jeanneret, P. R., Borman, W. C., Kubisiak, U. C., & Hanson, M. A. 1999. Generalized work activities. In N. G. Peterson, M. D. Mumford, W. C. Borman, P. R. Jeanneret, & E. A. Fleishman (Eds.), *An occupational information system for the 21st century: The development of O*NET:* 49–69. Washington, DC: American Psychological Association.

Khurana, R. 2007. *From higher aims to hired hands: The social transformation of American business schools and unfulfilled promise of management as a profession.* Princeton, NJ: Princeton University Press.

Kraiger, K., Ford, J. K., & Salas, E. 1993. Application of cognitive, skill-based, and affective theories of learning outcomes to new methods of training evaluation. *Journal of Applied Psychology,* 78: 311–328.

Luthans, F., & Lockwood, D. L. 1984. Toward an observation system for measuring leader behavior in natural settings. In J. G. Hunt, D. Hosking, C. A. Schriesheim, & R. Stewart (Eds.), *Leaders and managers: International perspectives on managerial behavior and leadership:* 117–141. New York: Pergamon.

Martell, K. 2007. Assessing student learning: Are business schools making the grade? *Journal of Education for Business,* March/April, 189–195.

McAlevey, L., & Everett, A. M. 2003. How can the quality gap be bridged? Avoiding a future of specialists isolation through statistics education. *TQM & Business Excellence,* 14: 801–810.

McCauley, C. D., Moxley, R. S., & Van Velsor, E. 1998. *The center for creative leadership handbook of leadership development.* San Francisco, CA: Jossey-Bass.

Mintzberg, H. 2004. *Managers not MBAs, A hard look at the soft practice of managing and management development.* London: Prentice Hall.

Morgeson, F. P., & Nahrgang, J. D. 2008. Same as it ever was: Recognizing stability in the *BusinessWeek* rankings. *Academy of Management Learning & Education,* 7: 26–41.

Mumford, M. D., & Peterson, N. G. 1999. The O*NET content model: Structural considerations in designing jobs. In N. G. Peterson, M. D. Mumford, W. C. Borman, P. R. Jeanneret, & E. A. Fleishman (Eds.), *An occupational information system for the 21st century: The development of O*NET:* 21–30. Washington, DC: American Psychological Association.

Noe, R. A. 2006. *Employee training and development* (4th ed). New York: McGraw-Hill.

Pfeffer, J., & Fong, C. T. 2002. The end of business schools? Less success than meets the eye. *Academy of Management Learning & Education,* 1: 78–95.

Pfeffer, J., & Sutton, R. I. 2006, Jan. Evidence-based Management. *Harvard Business Review,* 62–74.

Pfeffer, J., & Sutton, R. I. 2000. *The knowing-doing gap.* Boston, MA: Harvard Business School Press.

Porter, L., & McKibbin, L. 1988. *Management education and development: Drift or thrust into the 21st century.* New York: McGraw-Hill.

Rousseau, D. M. 2006. Is there such a thing as 'evidence-based management'? *Academy of Management Review,* 31: 256–269.

Rousseau, D. M., & McCarthy, S. 2007. Educating managers from an evidence-based perspective. *Academy of Management Learning & Education,* 6: 84–101.

Rynes, S. L., Giluk, T. L., & Brown, K. G. 2007. The very separate worlds of academic and practitioner periodicals in human resource management. Implications for evidence-based management. *Academy of Management Journal,* 55: 987–1008.

Rynes, S. L., & Trank, C. Q. 1999. Behavioral science in the business school curriculum: Teaching in a changing institutional environment. *Academy of Management Review,* 24: 808–824.

Rynes, S. L., Trank, C. Q., Lawson, A. M., & Ilies, R. 2003. Behavioral coursework in business education: Growing evidence of a legitimacy crisis. *Academy of Management Learning & Education,* 2: 269–283.

Schippmann, J. S., Ash, R. A., Battista, M., Carr, L., Eyde, L. D., Hesketh, B., Kehoe, J., Pearlman, K., Prien, E. P., & Sanchez, J. I. 2000. The practice of competency modeling. *Personnel Psychology,* 53: 703–740.

Segev, E., Raveh, A., & Farjoun, M. 1999. Conceptual maps of the leading MBA programs in the United States: Core courses, concentration areas and the ranking of the school. *Strategic Management Journal,* 20: 549–556.

Stray, S., Naude, P., & Wegner, T. 1994. Statistics in management education. *British Journal of Management,* 5: 73–82.

Tannenbaum, S. I. 1997. Enhancing continuous learning: Diagnostic findings from multiple companies. *Human Resource Management,* 36: 437–452.

Tett, R. P., Guterman, H. A., Bleier, A., & Murphy, P. J. 2000. Development and content validation of a "hyperdimensional" taxonomy of managerial competence. *Human Performance,* 13: 205–251.

Thompson, K. R. 2004. A conversation with Milton Blood: The new AACSB standards. *Academy of Management Learning & Education,* 3: 429–439.

Trank, C. Q., & Rynes, S. L. 2003. Who moved our cheese? Reclaiming professionalism in business education. *Academy of Management Learning & Education,* 2: 189–206.

Tornow, W. W., & Pinto, R. R. 1976. The development of a managerial taxonomy. A system for describing, classifying and evaluating executive positions. *Journal of Applied Psychology,* 61: 410–418.

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