ABSTRACT

Notwithstanding the apparent success of modern management education and predictions of increasing demand for business school graduates, the educational product has been subject to considerable criticism. We refer to this as the “performance paradox.” If market forces attest to both the demand for and apparent success of business school graduates, why has the educational product been subject to so much criticism? In our effort to address the paradox, we focus on three separate but related points of attack: First, we ask whether the value of a business degree can be attributed primarily to the signal it provides to potential employers rather than the value of the education itself. Second, we consider the suitability of current curricular content and pedagogy for addressing the needs of modern management. And third, we evaluate the ability of metrics commonly used to determine whether a management education program is successful. We conclude that, as a whole, business schools fall short with respect to each of these criteria. We discuss why this might be the case and suggest what business schools might do to improve the quality of their offerings.

INTRODUCTION

Recent statistics regarding placement and salaries of newly minted Master of Business Administration (MBA) students suggest that business schools are successfully educating and placing their students as future managers, at least at the most highly rated educational institutions. A 2020 U.S. News & World Report study (Kowarski, 2020) found that the average starting salary and bonus for graduates of the ten programs with the highest average compensation was $173,860, with a very high percentage getting jobs within three months of graduation. However, the average drops dramatically when considering MBA programs as a whole. The average for the 129 ranked full-time programs that reported data on the U.S. News & World Report survey, was $106,757, with a much lower proportion of graduates obtaining placement within three months of graduation. The average for the ten full-time programs with the lowest average reported salaries was $52,820. In other words, graduates of the most prestigious business schools are, on average, compensated at three times the rate of graduates from the lowest ranking schools.

What makes these statistics particularly interesting is that most business schools tend to teach the same thing. That is, they have sought to build their curricula around a common body of scientific knowledge, principles that have been found to foster sound management decision-making. Alajoutsijärvi et al. (2015) refer to this as the scientification of the business curriculum. The most prestigious schools tend to hire research-oriented faculty that contribute to this scientific knowledge, but their contributions tend to be specialized and confined to their areas of research. Their teaching addresses the broader area of established knowledge, the content of which varies little, regardless of where it is taught. In other words, the actual content of courses tends to be “commoditized,” differing little from school to school.

Given the commodification of management education across schools, what explains salary and placement differences across school? Several possibilities come to mind. Perhaps the most obvious would be that better schools hire better teachers. This would be consistent with the fact that the schools offer more attractive compensation to their professors and lecturers, enabling them to be more selective in their hiring practices. A study by Hong and Honig (2016) suggests that faculty compensation depends on both the intellectual capital of faculty members (i.e., the quality and number of publications) and professional legitimacy (i.e., journal
editorial board membership). However, neither of these demonstrates an ability to effectively facilitate students’ mastery of the commoditized curriculum addressed in the classes they teach. In a seminal article, Bennis and O’Toole (2005) persuasively make this case, suggesting that the scientification of the business curriculum has not only commoditized education but has elevated the status of research professors at the expense of teachers who are better able to help students understand how the curriculum relates to the actual practice of management.

Another possibility is that more prestigious schools can be more selective, attracting more talented students. Such students would logically get more out of the commoditized knowledge they are exposed to, thus increasing their human capital, making them more productive employees. A study by Camuffo and colleagues (2009) found that students who mastered specific skills while studying in their MBA program performed better in subsequent employment. However, Pfeffer and Fong (2002) argue that, “There is little evidence that mastery of the knowledge acquired in business schools enhances people's careers, or that even attaining the MBA credential itself has much effect on graduates' salaries or career attainment” (p. 80). While this appears to contradict Camuffo and colleagues’ findings, Camuffo et al.’s study addresses specific skills acquired by individual students. In contrast, Pfeffer and Fong (2002) address generalizations across programs where the effect of students who master useful skills may be lost in the effect of the majority who do not. This is consistent with Bennis and O’Toole (2005) statement that “[A] large body of evidence suggests that the curriculum taught in business schools has only a small relationship to what is important for succeeding in business” (p. 84).

The most compelling answer to the paradoxical relationship between scientification and salary/placement outcome measures is that the difference in salaries and placement of graduates between the most prestigious and least prestigious schools has little to do with education itself, but rather, is the role the school and degree play in signaling a student’s pre-education future value to potential employers. This is a key point in Pfeffer and Fong’s (2002) argument: “Even those studies that have found a positive effect of the MBA degree are open to the alternative interpretation that what is being assessed is the quality of the student body rather than the effects of acquiring some specific skills or knowledge” (p. 82). This point is reinforced by Hussey (2012) in a longitudinal study of several thousand MBA graduates suggesting that roughly 90% of the return to the investment in an MBA comes from signaling versus 10% attributed to an education-based increase in human capital.

We do not discount the importance of using education to signal one’s pre-existing abilities to potential employers. However, we also espouse the value of management education as a means of increasing the human capital needed to become a more effective manager. The purpose of this paper will be, first, to address the question of why management education has not been more effective in generating meaningful human capital, and second, based on the answer to the first question, what might be done to mitigate the situation.

**THE PERFORMANCE PARADOX: WHY MARKET FORCES DO NOT FOSTER BETTER MANAGEMENT EDUCATION**

The avowed purpose of management education is to develop greater management expertise in students, or to increase human capital (Porter & McKibben, 1988). Clearly, such increases in human capital would be beneficial to potential employers by increasing the quality of management performance. So why have market forces not operated to create greater human capital? This is what we refer to as “the performance paradox.”

We believe the answer lies in the function of signaling. Just as students signal their value by acquiring educational credentials, business programs signal their value in two ways: The first is by acquiring professional legitimacy, an idea reflected in the 2016 study by Hong and Honig. The professional legitimacy of a school is reflected in the credentials of its faculty, both through the research they conduct and knowledge they contribute to the field and through the role they play in the evaluation and dissemination of knowledge contributed by the larger body of management scholars, a reflection of the scientification movement referenced in the Introduction.

Second, business programs signal their value by graduating students who prove to be effective managers. Using ex-post measures of perceived effectiveness, the various signaling functions converge and become self-reinforcing. Employers look to prestigious schools as a source of high-quality students. Students look to prestigious schools as a doorway to high-quality employment. As long as these signaling functions reinforce each other, they produce the desired results, independent of the economic value created by increasing human capital through educational activities.

Consider what business program signaling means in practice. Companies compete for students with the highest productive potential, regardless of whether it is inherent in the student herself or created by the educational program’s quality. This competition results in high salaries and attractive job placement for graduates from the most prestigious programs. Placements, then, drive the metrics by which the schools judge their success and by which attractive students choose the programs in which they hope to enroll. These output metrics (e.g., Placement rates and salaries) are also driven by input metrics relating to the prestige of the faculty (e.g., Research publications, editorial activities), and by extension, the prestige of the program. The fact that students are competing for admittance enables the schools to charge higher tuition and attract more giving on the part of alumni and other individuals who partake vicariously in the school’s prestige.

**UNRAVELING THE PARADOX: THE ROLE OF QUALITY EDUCATION**

Note that the missing ingredient in the foregoing discussion is the nature of education itself. We have alluded to the problem
by describing scientification and the commoditization of management education into standardized business curricula. This removes educational quality as a differentiating factor in the market. Consequently, business programs have focused on institutional prestige, quality-student recruitment, and successful placement of students as methods of differentiation. Although we accept the role of education as a method of signaling one’s potential as a productive employee, we also believe that education can provide value through increases in human capital. Specifically, we believe that education can be improved by addressing two problems:

First, management expertise is not a commodity, even if there does exist an underlying standardized body of knowledge. As Bennis and O’Toole (2005) point out, the commoditized curriculum is ineffective because business principles are taught independently as individual concepts. Porter’s (1990) classic work in competitive strategy highlights the problem by providing vivid examples of how principles take on different meanings as they interact with each other within the context of actual business settings. The implication is that the curricula should not be built around scientific management principles, but rather, these principles should be introduced in the context of practical applications where students can learn to apply them in their natural habitat.

Second, even if management expertise were a commodity, there is no reason to believe that research scholars are best suited to deliver this expertise to students. Bennis and O’Toole (2005) argue that management teachers should themselves be skilled managers who can guide students through the processes they themselves would use to apply management principles in real-world situations.

From a pedagogical perspective, a successful program would need to conceptualize exactly what management skills (as opposed to knowledge of management principles) would be useful in the professional world. In the most general sense, we believe these skills are captured in the distinction between Bloom’s (1956) original taxonomy of educational objectives and its subsequent revision in the early 2000s (Anderson et al., 2000; Krathwohl, 2002). On the surface, the two taxonomies appear very similar. However, the difference offers a profound clarification of the scientification problem. The original taxonomy was unidimensional, including a progression of increasingly sophisticated levels of knowledge achievement: facts and conventions, comprehension, application, analysis, synthesis, and evaluation. In the context of management, we can characterize the progression as follows:

1. **Facts and conventions** represent the primary observational data from which management theory is developed.
2. **Comprehension** involves the understanding of how these data are configured as meaningful constructs.
3. **Application** is the mapping of these constructs onto actual management situations.
4. **Analysis** breaks situations into theoretically meaningful patterns.
5. **Synthesis** uses analytical patterns to identify and provide insights into new situations.
6. **Evaluation** seeks to determine the validity of knowledge derived from the prior steps by examining its logical consistency.

This initial taxonomy provides a framework for conceptualizing the elements of scientific knowledge. However, it conflates knowledge with the cognitive processes (skills) by which the knowledge is derived and utilized. We may think of **comprehension, application, analysis, synthesis, and evaluation** as processes. However, in the context of textbooks and lectures, they are increasingly sophisticated facts and conventions, or the static embodiment of knowledge developed by research professors and other students of managerial behavior. This knowledge is essential, but by no means sufficient, in the development of managerial competence.

In contrast, competence involves the skills needed to transform knowledge to address an ongoing stream of new situations and problems. The revised taxonomy (Anderson et al., 2000; Krathwohl, 200s) addresses the distinction between knowledge and skills by positing a separate “process” dimension. Again, framing the concepts in the context of management, we can characterize the progression of skills as follows:

1. Remembering facts and conventions that might be useful when addressing a new situation.
2. Understanding the underlying constructs represented by the facts and conventions used to describe the observed data.
3. Applying the pattern of constructs to the situation in a coherent pattern.
4. Analyzing the underlying cause-and-effect relationships driving the pattern of constructs.
5. Evaluating the validity of the proposed cause-and-effect relationships.
6. Creating new patterns of cause and effect to address the managerial goals in the situation.

The case study approach might be construed as a potential method for combining knowledge with process learning. However, cases do not expose students to the broader range of physical activities and emotional involvement that drive actual managerial decision-making (McCarthy & McCarthy, 2006). Hoover, Giambatista, Sorenson, and Bommer (2017) address this shortcoming by suggesting what they characterize as “whole person learning,” a pedagogical approach that incorporates activities that address the emotional/affective and behavioral elements of managerial decision-making as well as the intellectual/cognitive elements that characterize case analyses. Taking a different approach, rather than suggesting that specific pedagogical activities be applied generically, as do Hoover et al. (2017), Cannon, Cannon, Geddes, & Smith, (2020) apply service-dominant logic (Vargo & Lusch, 2004; 2008) to the problem by developing a model that facilitates the identification and application of specific pedagogical activities (operand resources) that meet student-specific pedagogical needs and capabilities (operand resources). Operand resources are shaped by students’ individual backgrounds and experiences.

Note that the educational approaches suggested by Hoover et al. (2017) and Cannon et al. (2020) are merely illustrative of the much more extensive literature addressing the principles of experiential learning, where students are engaged in a continual process of experimentation, or what Lewin (1947) characterized as “action research.” In other words, we believe that the process...
MANAGING THE METRICS: THE KEY TO SELLING A BETTER PROGRAM

As we noted earlier, the signaling function provided by business school graduation appears to be driving business school strategy (Hussey, 2012). Aside from the economic function signaling provides, it appears to be self-reinforcing, thus increasing its strategic influence. That is, as long as businesses continue to reward MBA graduates based on the selectivity of students, and talented students seek out the most prestigious schools based on their placement statistics, business schools will be motivated to expend resources to recruit the most talented students, seeking to enhance their academic reputations and placement statistics. These are laudable objectives and may well play a legitimate role in a school’s overall promotional strategy. However, as we have pointed out, they have relatively little to do with the fundamental purpose for which business schools were created, that of contributing to the human capital needed to make managers more effective in their jobs.

Presumably, increased human capital would have value in the market for managerial talent, thus giving an advantage to schools that develop higher-quality educational programs. The most obvious explanation for why curricula do not appear to be a differentiating factor is that no business school offers a significantly better educational experience than others, a consequence of scientification and the resulting commodification of the curricula. As Gosling and Mintzberg (2004) point out, “Management education takes place in MBA programs, which are remarkably standardized in content—across schools and around the world.” They go on to say, “Management may use science, but it is an art that is combined with science through craft. In other words, managers must face issues in the full complexity of living, not as compartmentalized packages. Knowledge may be important, but wisdom—the capacity to combine knowledge from different sources and use it judiciously—is key” (p. 19). Not only do commodified programs provide little basis for differentiation across programs, but, as Gosling and Mintzberg (2004) and Bennis and O’Toole (2005) argue, a curriculum based solely on scientific knowledge is insufficient in any case. Management is a skill that must be nurtured through practice.

Assuming a school develops a truly superior management education program, the school would still face a potential lack of interest on the part of students and their potential employers, given the self-reinforcing nature of the established signaling-based metrics. Signaling provides a legitimate economic function, the magnitude of which is expressed in the differential salary and bonus paid to graduates from prestigious business school programs versus those who seek the same jobs, having graduated from less prestigious programs or without business-school credentials. In order for the quality of education to make a difference, it’s incremental value would have to be large enough and sufficiently well documented to change the way both students and employers evaluate business programs. That is, these evaluations would have to put relatively more weight on the actual nature of the education and demonstrated competence of graduates than on the selectivity of student admissions, the research-based competence of faculty members, and statistics regarding the salary and placement of prior graduates.

As we have suggested, the quality-of-education issue has been addressed extensively in the literature, including articles by prestigious “practitioner-oriented” journals by authors whose work is highly respected by both the academic and practitioner communities (e.g., Gosling and Mintzberg, 2004, and Bennis and O’toole, 2005, published in the MIT Sloan Management Review and the Harvard Business Review, respectively). Based on our own observation and review of the relevant literature, discussing the quality of education does not appear to have made much difference in actual student and employer program evaluations. This suggests to us that the key change would have to be in finding ways to demonstrate the actual managerial competence of program graduates. In practice, the change would require a school with less selective admission requirements and a non-research-oriented faculty to demonstrate convincingly that their graduates were equal to or more competent than those of today’s more prestigious schools. To our knowledge, no such measure of competence currently exists and is currently being used by schools of business.

Dimmock et al. (2003) conducted a longitudinal study of student managerial competence within the tourism industry. However, the study was based on self-reports of student graduates, and while such a study may be indicative of students’ perceived learning, it would not likely be convincing enough to move companies to change their hiring practices. Bücke and Poutsma (2010b) conducted a survey of instruments designed to measure global management competency, but again, these were based primarily on students’ self-reported attributes. In a separate study (Bücke and Poutsma, 2010a), they conducted an extensive review of the literature on global management competence and developed a theoretical framework for assessment based on four general constructs—global mindset, cross-cultural competence, intercultural sensitivity, and cultural intelligence. As useful as these studies are for guiding curriculum development, they are too general to address the myriad specific knowledge components students would reasonably have been expected to master during the course of their program. Furthermore, they address the “commodified” curriculum discussed earlier in this paper. They do not address the actual behavioral competencies (what we have characterized as “skills”) required to apply the acquired knowledge in practical management situations. Nor do they address what Cannon et al. (2014) refer to as individual absorptive capacity, or the ability to quickly identify, acquire, and apply new, specific knowledge and skills needed when facing new, unanticipated situations.

The problem, then, is threefold: First, any assessment must address managerial skills, not just knowledge. Second, the
instrument must be comprehensive, addressing the broad range of knowledge and skills potential employers would reasonably expect students to have mastered. And third, the instrument would have to include an assessment of individual absorptive capacity. Given the magnitude of such an assessment effort, a reasonable approach would be to break the assessment down into modules, each one addressing a component of the overall curriculum. These modules are typically organized by course, and the logical measurement might be the final exam. Cannon, et al. (2014) argue that individual absorptive capacity is a generalized skill that should be applied to the subject matter of every course in the curriculum, again suggesting that final exams would be a good starting place for developing a comprehensive assessment. Given that these exams would become part of the school-wide strategy for certifying student competence to potential employers, the school would invest in standard behavioral assessment technologies, systematically adapting them to the content of each course. The assessment system would establish performance norms that could be calibrated over time. In order to give the system external validity, the calibration and overall design of the assessment system would be conducted in concert with potential employers, or at very least a panel of knowledgeable stakeholders.

The actual assessment methodology is a subject for ongoing research. Consistent with our behavioral bias and the general thrust of the Association for Business Simulation and Experiential Learning (ABSEL), we should note that assessment has historically been an important topic within the ABSEL research community. To illustrate, Kline (1986) summarizes multiple competency initiatives sponsored by organization such as the Association to Advance Collegiate Schools of Business (AACSB), the European Foundation for Management Development (EFMD), and the American Management Association (AMA), discussing how these might relate to ABSEL research and activities. Over the years, assessment has been a popular topic, as reflected in a multitude of papers as well as informal discussions at ABSEL conferences. In the late 1990s, a systematic effort was made to develop a framework for using simulations as instruments of assessment (Gentry et al., 1996; Anderson et al., 1998; Cannon & Burns, 1999).

The logic behind the ABSEL discussions echoes the notion that student performance in educational activities should constitute evidence of the learning the activities were designed to facilitate (Gosen & Washbush, 2004). Following this logic, simulations should provide a particularly useful tool for assessment, because they typically provide concrete measures of performance. This is a central theme in Thavikulwat’s advocacy for the use of simulations as instruments of assessment (Thavikulwat, 1994; Thavikulwat, 1997; Thavikulwat & Pillutla, 2004). Much of the controversy regarding the use of simulations revolves around how one should measure successful simulation performance. For instance, should the evaluative criterion be based on a profit-related measure (Biggs & Fritzsche, 2010) or an evaluation of how the participants made the decisions from which the profits were derived (Souza et al., 2010).

Our concern is that, while simulations address numerous important management competencies, they tend to address large, strategic decisions at the expense of the day-to-day judgments and interactions that constitute most of what a practicing manager does. We argue for the development of standardized measures of skills relating to such things as innovation [(e.g., the form of number and uniqueness of entrepreneurial ideas), interpersonal effectiveness (e.g., communication, conflict resolution, negotiation skills), critical thinking (e.g., situation analysis), and leadership (e.g., identifying and fostering diverse perspectives). Souza, et al. (2010) take a step in this direction by attempting to model the decision-making process students go through when competing in a simulation game, as an effort to evaluate the validity of their judgements. However, this only addresses one of the skills we need to address.

In order to get a better sense of how we might proceed, we considered the approach taken by management consulting firms, such as McKinsey & Company, who have a long history of assessing the managerial skills of job candidates in behalf of their clients (https://www.mckinsey.com/careers/interviewing#). They identify the specific operational competences they are looking for and then

![FIGURE 1: The Structure of a Contextually Anchored Business Simulation Game](image)

design problem scenarios that address those specific skills. They then discuss the problems scenarios with the candidates while a second consultant watches and evaluated the candidate’s responses. The problem scenarios the consultants use to evaluate job candidates are really simulations representing the kinds of situations a candidate would have to address in the actual organization in which they are seeking employment. For the sake of efficiency and reliability, we wonder if this process could be automated?

Cannon and Ternan (1997) introduce a concept they call a contextually-anchored simulation. The concept works on three levels, as illustrated in Figure 1.

At the deepest level, it features a conventual mathematical algorithm, or econometric model, that determines the outcomes of specific business decisions. At the second level, these models are embedded in contextual elements that would be found in a typical business decision-making process. For instance, a pricing decision might require input from multiple departments, each with their own agenda and constraints, supported by (potentially conflicting) analyses and recommendations. At the third and highest level, the student would play the role of manager, physically and emotionally involved in a simulated work situation. For instance, the student might be represented in real time by an icon that can be made to walk down a hall to her office, sit down, check her inbox and telephone messages, then processing the issues they raise. For instance, she may get messages relating to her pricing decision from five subordinates, three containing conflicting information and two with consistent information, but conflicting recommendations. Depending on the skills being tested by the simulation, she would be provided with the necessary tools and information needed to address the issues, and a pre-determined set of algorithms would score her performance, based on the processes she used to solve the problem.

Developing this kind of simulation would be complex and expensive. However, the value would be enormous. Furthermore, the process would likely involve a relatively steep learning curve that would result in significant economies as the process was applied to an increasing number of situations. Most important, it would likely be very convincing to potential employers, who might be given diagrams, or actual recordings of the student’s problem-solving activities as she moved through the simulated activities. Scaled up as a process used across the entire curriculum, this type of approach would address the two critical goals required to establish educational effectiveness as a criterion for marketing graduates to potential employers, and consequently, recruiting ever more talented students. First, it would demonstrate that the human capital developed through the school’s business programs can be measured, and second, that such measurement enhances school’s motivation and ability to differentiate through improvements in human capital.

SUMMARY AND CONCLUSIONS

Management education today presents a paradox of performance. That is, notwithstanding the high salaries paid to the graduates of today’s top MBA programs, and the popularity of business programs in general, there is substantial evidence that they do not deliver a commensurate educational advantage in the form of increased managerial human capital. Stated simply, business programs do not perform well educationally. Instead, their relative popularity appears to result primarily from the role the programs play as a signal of graduates’ pre-existing motivation and competence.

This is not to say that increasing human capital through the deployment of quality education is not possible or that it has no value, only that it is under-appreciated and under-delivered in the market. We suggest that this is because business schools have shaped their strategies around their ability to attract desirable applicants and place them in attractive positions with industry. The adoption of scientific management knowledge as a common source for business school curricula (what we refer to as “commodification”) has effectively removed human capital development as a basis for differentiating one program from another. Furthermore, we suggest that this “scientification” of the curriculum has proven relatively ineffective when used to develop managerial human capital. So, even if a program were to develop a new curriculum based on a new and updated body of scientific knowledge, the new curriculum would not provide any educational advantage over other programs.

Based on our application of Bloom’s revised taxonomy of education (Anderson et al., 2000; Krathwohl, 2002) and Kolb’s (1984) experiential learning cycle in the context of management education, we conclude that management is a skill, not the mastery of a body of scientific knowledge. It involves a process that is dependent on knowledge, to be sure, but even more dependent on the ability to apply this knowledge in unstructured situations, where the interactions among principles are generally unclear. These skills develop out of practice, involving an on-going process of action research focused within this domain. Students must be immersed in real or simulated management situations; they must draw on their understanding of management principles to develop hypotheses regarding the outcomes resulting from different management decisions, and they must test these hypotheses using the feedback they get from the instructor or actual decision outcomes. The cumulative result is the development of their ability to project what.

The final point that we addressed is how to measure and motivate the adoption of a more progressive educational approach if it were developed. Given that the market appears to have settled into a pattern that rewards signaling over educational value, we conclude that the key lies in the ability of programs to demonstrate that they can develop human capital and that this value rivals that delivered by students who were selected by other schools based on their intrinsic management potential. We argue for the need to invest in assessment tools that reflect graduates’ ability to adapt and apply management principles in heretofore unknown business settings. We believe that the development and use of such measures would motivate business programs to shift their relative focus
from differentiating through student recruiting to differentiating through their ability to develop human capital through managerial skills.

REFERENCES


