ACHIEVING INTEGRATION IN BUSINESS EDUCATION: THE ROLE OF CONTEXTS

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ABSTRACT

"Breaking down the silos" which has become a standard mantra in B-Schools remains an elusive goal despite the various attempts over the years to achieve integration across business disciplines. This paper proposes a framework that emphasizes the importance of appropriate contexts as platforms around which integrative thinking in business education can take place. It discusses the role of the contexts in supporting and improving integration in business education. The characteristics desired in such contexts are identified. The context provided by Performance Management (PM) is shown to have these desired characteristics. The implications for B-School programs are discussed.

Keywords: Integrative Thinking; Business Education; Integration in Business Education; Contexts for Integrative Thinking; Performance Management

INTRODUCTION

Business education comes under a lot of criticism compared with parallel education programs in medicine, law, science, and engineering. Such criticisms range from what is taught to delivery. In a *HBR* article entitled "No, Management is Not a Profession," the author Barker (Barker, 2010), affirms such criticism, but goes further, saying that "some business skills can't be taught in a classroom. They have to be learned through experience." The article goes on to say that "business education is more about acquiring the skills of integration than about mastering a set body of knowledge" and "the key is to recognize that integration is learned rather than taught: it takes place in the minds of MBA students, who link the various elements of the program."

Moreover, Barker emphasizes that "business education is not one-size-fits-all." Barker's *HBR* article also cites McGill's Henry Mintzberg's belief that MBA programs straitjacket managers by encouraging development of narrow functional expertise rather than the integrative skills that define effective management. Although critics of business education point to a variety of indicators and consequences, weak integration appears to be the most common and far-reaching of the criticisms.

On the other side of this continuing examination, it should also be acknowledged that, over the years, business schools, business education leaders, texts, etc., in recognition of the breadth and depth of the integration challenges have created a variety of tools and approaches to address them. For instance, responding to the assertion of Barker that "The key here is to recognize that integration is not taught but learned," in a spirited rebuttal, Roger Martin, the Dean of the Rotman School of Management at the University of Toronto, argued that just integration has not

been taught does not mean it is unteachable and pointed to the work being done at the Desautels Centre at the Rotman School to enable the teaching of integration (Martin, 2010).
While we recognize that Desautels Centre (Desautels Center, 2012) is trying to address the issue of teaching integration in a systematic and rigorous manner, B-Schools, over the years, have used various approaches for promoting integration across disciplines. Section I below provides a brief review of those efforts. Instruments such as multi-student projects, team teaching, visits by business leaders, internships, case studies, simulations, community projects, etc., often emphasize better integration of discipline knowledge as a key objective. In addition, many schools use "capstone" courses, such as strategy or special projects, in large part, to pursue better integration. Overall, it appears that critics and defenders of business education agree on both the importance and the difficulty of integration. This speaks to a continuing need to explore mechanisms to improve, support and evaluate integration. However, it should be noted that academic practitioners and those who employ business graduates might not necessarily agree, except in very broad and general terms, on what integration means in practice.

The paper is organized as follows. Section I provides a brief review of multiple perspectives on integrative thinking and of the efforts – in education in general and in management/business education in particular – to develop integrative thinking skills in students. The role and characteristics of contexts for achieving and promoting integrative thinking in business education are addressed in section II. In section III, Performance Management (PM) is presented as a mechanism satisfying those context characteristics. The implications for business programs are discussed in the concluding section.

I. INTEGRATIVE THINKING IN EDUCATION

Developing integrative thinking (IT) skills is considered an important goal in education. Classroom activities, assignments and pedagogy are designed to emphasize the development of such skills. For instance, professors of history expect their students to go beyond historical facts – which themselves are often vehemently disputed – and comprehend the relationship between those facts in order to find answers to how and why the events – that underlie the facts – happened. In professions such as engineering and medicine, being able to apply specialized knowledge in an integrative fashion is critical. In fact, greater the degree of specialization, greater the need for integration. In those professions it takes many years of advanced schooling and practice to develop those skills. Typically, in the academy, the specialized knowledge is taught in disciplinary silos and opportunities – as part of educational experience – that challenge students' integrative thinking are limited for instance, to capstone senior projects. However, in order to get the license to practice medicine or engineering, demonstration of the application of integrative thinking is required. This requirement is usually fulfilled by completing residency in medicine and by acquiring certain years of experience in the field of engineering. Also there are objective ways to evaluate the application of integrative thinking e.g., a civil engineer who is not able make the electrical, mechanical, and hydraulic systems work together in a building cannot easily hide that fact.

Business is another profession – though some would argue that it lacks the code that characterizes a profession (Khurana & Nohria, 2008) – which places a similar demand on integration. Business does differ from the above mentioned professions in a crucial way – one

does not have to be licensed to practice business management. Moreover, it is difficult to objectively link the business outcomes to the application of integrative thinking. At best, one looks for evidence of such thinking in the process that leads to the outcomes. Integrative thinking is clearly important and relevant in business as managers ascend the organizational ladder and get involved in activities such as strategic planning (Schoemaker, 2012). But they are relevant in entry level positions as well because most managerial work, business processes and systems are cross-functional in nature. Businesses would like to hire a "**T** "type individual, i.e., one who has deep knowledge anchored in a particular discipline and the ability to integrate that knowledge with other disciplines.

These requirements of business pose a challenge for business educators – how to develop promote, achieve and assess the capacity for integrative thinking in business graduates. But this challenge is not perceived to be an urgent one because there are no accreditation imperatives for IT compared to say sensitizing students to the ethical dimensions and dilemmas in business decision-making and practices. Responding to pressures from accrediting agencies such as AACSB International, B-Schools are likely to pay more attention to incorporating ethics and sustainability in their curriculum.

There are multiple perspectives on what constitutes integrative thinking. One of the earliest such perspectives is provided by Bloom's taxonomy for the cognitive domain (Bloom,1956). In the taxonomy, IT is denoted by *Synthesis*, a higher level ability, which "Builds a structure or pattern from diverse elements. Puts parts together to form a whole, with emphasis on creating a new meaning or structure," (Bloom,1956). While Bloom's taxonomy is an accepted pedagogical tool for designing educational objectives for courses and curriculum it has not had much impact on business education by way of promoting integrative thinking in students.

Another perspective is provided by the *Systems Approach* made popular by the writings of scholars such as Ludwig Von Bertalanffy and Kenneth Boulding. According to Von Bertalanffy, all systems must be explored not only in terms of their components but also in terms of their relationships for gaining a fuller understanding of how the system functions (Von Bertalanffy, 1962). Analysis by breaking the system down into its constituent parts is not sufficient to understand the systemic characteristics of the whole. In the late 1960s and early 1970s this approach had an impact on management education. It was seen as a way to integrate the hard, quantitatively oriented disciplines of business with the soft, qualitative, humanistic disciplines. In 1973, the Social Systems Sciences Doctoral Program at the Wharton School of Business was started with the ultimate purpose of producing systemic thinkers (Roth, 1993). But, by the 1980s, *Systems Approach* came to be viewed as a fad in management education because it had became too esoteric and academic. It was difficult to wrap one's mind around the systems concept. More crucially, it did not help in identifying the expertise that was needed to be a systemic manager.

Bloom's Taxonomy and the *Systems Approach* were not tied to any particular context for their application nor were they developed in response to some practical concerns. Two other approaches that focused on the holistic characteristics of systems were developed as responses to problems faced by industry and society. By late 1950s, at MIT, Jay Forrester was building mathematical models of industrial supply chains to understand the dynamic behavior of certain

key variables such as output and inventories in response to changes in demand (Forrester, 1961). These models incorporated causal and feedback loops and information lags in those loops. Later, social systems were modeled using the same approach, for instance, to study urban growth and decay (Forrester, 1969). By 1990s, System and Business Dynamics itself had emerged as a separate, specialized field. Scholars Peter Senge (Senge, 1990) and John Sterman (Sterman, 2000) at MIT carried on in the tradition of Forrester, focusing their modeling efforts to help understand how learning through feedback takes place in complex systems. The simulation models they have developed for a variety of business and non-business situations are quite sophisticated. They are powerful learning tools for developing integrative thinking skills. But they do not easily lend themselves to incorporation in typical B-school curriculum. The closest a student gets to appreciating the power of these models is through the popular "Beer Distribution Game" simulation (Sterman, 2000) to study a systemic phenomenon known as the "Bullwhip" effect that occurs in supply chains.

The other context-driven framework for integration was Total Quality Management (TQM). In the 1980s, many business leaders in the U.S. were trying to address a serious problem i.e., how to improve the quality of the products and services and thereby improve the competitiveness of their businesses against foreign competition, notably Japanese. They soon realized that there has to be a major paradigm shift in the way quality is defined and managed in organizations. This led to the Total Quality Management (TQM) movement in U.S. industry. The word total meant encompassing all the functions and all the ranks in the organization (Kano, 1995). Here it is worth noting that many years earlier, in 1956, Armand Feigenbaum – one of the leaders of the quality movement in the U.S. – had already outlined a similar framework for what he called Total Quality Control (TQC) (Feigenbaum, 1961). In TQC, quality was a kind of burden to be shared—no single department shouldered all the responsibility. Top management was ultimately accountable for the effectiveness of the system. But TQC concepts had little impact on U.S. businesses until the competitiveness crisis of the 1980s (Kano, 1995).

CEOs of the time such as Robert Galvin of Motorola and David Kearns of Xerox (who later served as Education Secretary in the cabinet of President Bush senior) along with AACSB International, pushed for TQM to be part of B-School curriculum. And indeed many schools responded to this call by introducing courses on quality management. But once the crisis faced by U.S. companies passed, interest in TQM began to wane in industry and academia. An explanation for the initial enthusiasm for TQM would be that the burning issue of quality (or lack there of) provided the context around which integration across functions and ranks (through cross-functional teams and empowerment) could take place in organizations. Once that context became less important, TQM programs began to unravel. TQM would be sustained only in organizations that were able to tie quality issues to the strategic goals of the organization. Strategy provided the integrating context for TQM (Belohlav,1995), (George & Weimerskirsch,1994).

II. INTEGRATING CONTEXTS

Discipline Linkages

In recent years, Desautels Centre (mentioned above) has focused on the development of integrative thinking in business education. The centre's website offers the following definition: "Integrative Thinking is the ability to constructively face the tensions of opposing models, and instead of choosing one at the expense of the other, generating a creative resolution of the tension in the form of a new model that contains elements of the individual models, but is superior to each." Decision-making is modeled as involving the four steps of: 1) Salience; 2) Causality; 3) Architecture; and 4) Resolution. Integrative thinkers are supposed to approach these four steps in a very specific way. But the framework is context-free. Also it has a narrow decision-making focus where trade-offs have to be identified and tensions have to resolved.

For the purposes of this paper, we propose the following definition of integrative thinking. "Ability to utilize discipline-based knowledge, together with relevant and important internal and external information and factors, to analyze and support well-informed conclusions, choices, and actions." In light of this definition, the criticisms of integration and proposed remedies appear to translate into the view that academic discipline linkages are themselves the meaning of integration and/or the main purpose of integration. Some argue that better treatment of discipline linkages is the key to improving understanding of integration. We suggest an alternative view here: that students' purported weak understanding of discipline linkages may actually be a symptom of poor integration, but not its primary cause. The larger issue is inadequate contexts or frameworks for students' acquiring and "making sense" of facts, knowledge, and opinions. Such sense-making, or ongoing construction of understanding, is the essence of experiential learning. The efforts to improve integrative learning by better focus on discipline linkages would not be as effective as focusing on contexts in which such linkages occur as means, not as ends. Within such contexts, understanding discipline linkages should still be an important objective, but would need to make clear the purposes of such linkages and their varieties. The answer to *what* needs to be integrated is obvious i.e., disciplinary knowledge, but *why* and *how* that integration should take place is driven by contexts.

The most appropriate questions to pose in response to the valid criticisms and acknowledged challenges are: (1) What curricular and experiential learning (bodies of knowledge and related bodies of experience) should be used or created that not only promote understanding and acceleration of integration but also appropriately illustrate meaningful applications of disciplines?; and (2) How do we more directly seek to build students' *capacity* for experiential learning, so that it persists beyond formal education?

The common view of business disciplines is that each comprises a set of concepts, practices and tools sometimes called "bodies of knowledge". They lend themselves well to academic specialties, texts, courses and grading. They are also amenable to focused case studies that illustrate discipline bodies of knowledge but which also might help "stretch" understanding and show linkages across disciplines. However, such cases might also unwittingly reinforce specific, and perhaps narrow, bodies of knowledge and/or linkages. Our view is that the value of case

studies or other "real-life" educational exercises and tools depends greatly upon their underlying context(s).

Therefore, the relevant questions are:
• How are contexts selected or designed to avoid narrow focus or "partial" or "contrived" integration? If disciplines are linked in courses or cases with the view to enhance integration, how is context chosen or structured so that linkages used do not appear to define *the way* that the disciplines "connect"?
• How might case study and curriculum designers anticipate and enable creative uses of disciplines, and of discipline linkages, without primary focus on such disciplines themselves?
Such questions shift the focus from discipline linkages to effective integrating contexts.

Integrating Context: Characteristics

In our attempt to shift the focus from discipline linkages to integrative contexts, we begin by seeking criteria that might help guide the development of such contexts. Integrating contexts should be:
• *Authentic***:** Contexts should relate directly to relevant, important and enduring organizational purposes and requirements;
• *Experiential***:** Contexts should have high experiential content, revealing key aspects of organizations that business students and business graduates actually experience, and should be cognizant of, in their studies, subsequent work lives, and as consumers and citizens;
• *Systems oriented***:** Contexts should help students develop holistic views of organizations' larger purposes, strategies, objectives, requirements, and operations. This orientation should help promote the view that applications of business disciplines are varied and dynamic, not "cut and dried" or "packaged" routines;
• *Broadly applicable*: Contexts should span across all sectors of the economy that employ business graduates - manufacturing, services, government and non-profit organizations;
• *Open and dynamic*: Contexts should readily accommodate changes in organizations' goals, business models, strategies, practices, technology and discipline applications;
• *Tied to well-defined bodies of knowledge***:** Contexts should be "building blocks" of business education; and
• *Easily adapted to business education tools:* Contexts should lend themselves to texts, cases, projects and other pedagogical tools and mechanisms.

The above characteristics are intended to help focus on what we should look for in broad integrating contexts - to aid in their selection, design, use, and evaluation. A central part of the "logic" underlying this set of context characteristics is that contexts accommodate all business disciplines, but that such disciplines arise as means, not as ends.

III. PERFORMANCE AS A CONTEXT FOR INTEGRATION

This section discusses the potential utility of performance as an integrating context. By performance we mean organizations' achievements relative to key requirements, taking into account all stakeholders, including customers, employees, investors and the public. By performance management (PM), we mean the concepts, practices, initiatives and tools to

understand, manage, and improve organizations achieving their goals, built upon their purposes and strategies. Included within PM are:
• A systems orientation; derived from strategy and supporting strategy, taking into account the needs/ expectations of all stakeholders, as well as competitive factors;
• Process understanding and management;
• Comprehensive metrics/measures/indicators and their uses, derived from purposes, strategies and goals, supporting "management by fact" and organizational alignment;
• Improvement: incremental and breakthrough;
• Assessment; this includes analysis/trends/causation/comparisons/benchmarks.

Performance versus Context Characteristics

Authenticity: Organizational performance is a core issue for all organizations: manufacturing and service firms, healthcare, education, government agencies at all levels, and non-profit organizations. Financial and non-financial measures of performance are in wide use and growing rapidly.

Experiential: Increasingly, leaders' and employees' performance is tied to organizational performance and, in many cases, subparts of such organizations. Important subparts of many organizations are built around business and technical disciplines. Also, as consumers and citizens, performance is a significant part of what is actually experienced or observed by students and graduates.

Systems Orientation: PM, including measurement and analysis, increasingly relies upon holistic views of performance - ones that trace performance and performance problems to "root causes." "Systems thinking" and "integration" are inherently related. However, the latter makes little sense if it is not derived from the former. Systems thinking and performance goals "drive" integration and "drive" applications of business and other specialty disciplines. Changes in organizational goals and strategies can have major influence on applications of discipline knowledge.

Broad Applicability: Organizations in all sectors rely upon performance indicators of many types. Although organizations in different sectors might have quite different missions and goals, there are close parallels in their PM systems. This includes all aspects of efficiency and effectiveness.

Open and Dynamic: All elements of PM noted above are inherently open and flexible, because they are tied to real-time indicators used in decision-making. New areas of emphasis such as energy use, sustainability and innovation are easily accommodated. The availability of measures and comparisons accelerates the spread and diversity of PM practices. Because basic knowledge in business education is slower to evolve than applications of such knowledge, and performance drives applications, performance is an effective vehicle to capture organizational dynamics.

Meaningful Body of Knowledge: PM is a rapidly emerging body of knowledge. It is gaining in use and taking shape largely outside the academic arena e.g., the performance excellence model of the Baldrige Quality Award (George & Weimerskirsch,1994). The elements of PM outlined

above are common to most uses. However, PM is not yet an academic mainstream discipline. As a result, how it relates to other disciplines is not yet well described, even though in practice, PM relies upon all organizational subunits and their discipline-based bodies of knowledge.

Adaptation to Business Education: PM lends itself to holistic and to "before-after" cases. Students' and graduates' experiences as consumers and employees should be "awakened" via a performance outlook. Also, diagnosing "causation" is an important component of critical thinking. Such diagnosis can be applied to discipline performance and roles, and related to strategy. Of particular importance is the application of PM to understanding varieties of business models, business model selection and evaluation. This is critical to bridging across strategy, goals, metrics and operations.

IV. IMPLICATIONS FOR BUSINESS PROGRAMS

Building students' capacity for "sense-making" of business disciplines and of varieties of organizations, in school and beyond, would be enhanced via better integrating contexts, learned in school. This implies that in designing business curriculum and experiences that aim to promote integration, contexts have to be factored in the design. The different elements of Performance Management such as supply chain management, innovation, new product development, and entrepreneurship can serve as the integrating contexts and can be the bases for coursework and internships. Additionally, before incorporating them into coursework and other educational experiences, they have to be tested for the desired characteristics of integrating contexts that are presented in this paper.

In conclusion, we recognize that such program design should necessarily also address the increasingly important and challenging issue of assessing the integrative thinking abilities of students (Glenn, 2011). However, the topic of assessment is beyond the scope of the main message of this paper.

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