

Predicting the Emerging Organizational Structure of the 21st Century American University: Lessons from the U.S. Hospital Experience

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Higher education faces challenges to its core paradigms, a scenario that has existed in the hospital industry since the 1980s. In response, hospitals developed new structures, radically altering health care. Parallels between these industries are striking, both worlds influenced by institutional theory and dominated by highly educated, specialized practitioners wed more to their professions than their organizations. This paper proposes that the hospital experience provides guidance for an evolving 21st century higher education process, predicting that current silo-mentality structures will evolve into models characterized by major curricular reform, inter-organizational asset sharing, and network development that optimizes a dwindling resource base.

INTRODUCTION

It is no secret that the American university finds itself currently embroiled in a malevolent organizational environment. Student enrollments, particularly for the traditional, full-time day student, are uncertain, as four-year colleges and universities compete for a declining pool of applicants. The typical university's costs are rising greater than the general rate of inflation, as has the resultant rate of tuition increases, while scholarships and other sources of tuition assistance have not grown proportionately. The impact on student debt levels has become a quality of life issue, as new graduates must curtail such activities as home ownership, family formation, and in extreme cases using of bankruptcy as the only tool to escape debt repayment. This situation is approaching a critical mass and as so often occurs, the federal government is likely to intervene, as both political parties are receiving pressure from their constituents to remedy this problem.

This scenario is not unique to higher education. This same environment existed in the healthcare industry, most acutely in the hospital sector, particularly in the 1980s. The combination of rising prices, reduced insurance availability, and the resultant shifting of costs to the patient led to a consumer revolt which reached the ears of the federal government and ultimately fostered the creation of the managed care/prospective payment system that exists today. The industry morphed into a new healthcare delivery paradigm that radically changed how we receive care; the hospital sector was dramatically altered into an organizational structure characterized by significantly fewer, but larger, technologically advanced facilities embedded in regional healthcare networks/systems of physicians, acute care, ancillary services, and long-term care providers.

The parallels between the characteristics of the healthcare industry, particularly the hospital sector, and the college/university environment are striking. Both worlds are heavily influenced by institutional

theory and dominated by highly educated and specialized practitioners who are wed at least as much to their professions as to the organizations in which their skills are applied. As professionals, both healthcare and educational practitioners are confronting outside stakeholders determined to change how their professions are managed. Given these parallels, the proposition anchoring this research is as follows:

Proposition: Can the experience of the hospital sector of the U.S. healthcare industry shine a predictive light on how colleges and universities, and the practitioners within these organizations, evolve in the 21st century?

LITERATURE REVIEW

The U.S. Higher Education Dilemma

It is no secret to the key stakeholders in higher education that the institution finds itself in a precarious dilemma, one which will inevitably result in a dramatic restructuring in the way in which higher education is viewed and delivered. Long term participants in the profession find ourselves challenged by the emerging and largely unknown reconfigurations to the educational model that has historically provided a great deal of value to both students and society. What has caused this upheaval to occur?

Schejbal (2012) has neatly described the paradox in which higher education finds itself. Corresponding with the end of World War II and the rise of the baby boomers, a period that is described as the “golden age of higher education” (p. 374), widespread acknowledgement arose to the value and desirability of a college degree as well as the benefit to society of funding higher education using public dollars. With the growing economic wealth that characterized so much of the second half of the 20th century, the perceived inefficiencies of the higher education system were largely tolerated.

The Rise of Cost Sharing

As the rate of personal economic growth slowed, beginning at the end of the 20th century and continuing to the present time, the increase in college costs has not followed the same trend. For example, the past 30 years has seen the average tuition at a public, four-year college increase by over 250%; family income has improved by just 16% during this same period (Washington & Salmon, 2014). Further compounding the situation, the level of tax-supported financial aid for higher education has diminished (Larrabee, 2009). Finally, the monetary crisis of 2008-2009 severely damaged the endowment base safety net of virtually every higher education institution (Carpentier, 2012). As a result, public angst over how to fund the ever-rising tuition bills has reached the politicians’ ears.

Colleges and universities have responded to this emerging threat by exploring alternative avenues for maintaining their revenue streams, a phenomenon known as cost sharing. The pretext underlying the cost sharing paradigm is that multiple sources of public and private revenue have historically been available to fund, i.e. share, a university’s operations. Tuition, multiple types of federal and state government subsidies, development and fund raising, invested endowments, and even athletics in some cases have been sufficient to maintain and expand the higher education industry. The public sources of this support have steadily eroded, however. State contribution to public universities is now approximately 25% of total revenue, forcing the typical university to employ its own creativity in raising the other 75% of its budget (Capaldi & Abbey, 2011). Private universities receive approximately 13% of their revenues from federal, state, or local governments (Lemke & Shughart, 2016). The result has been the gradual shift of revenue responsibility from the public to the private side of the equation, particularly the tuition costs for the individual student. This trend presents a dual equity and ethical dilemma, as the educational cost burden is increasingly focused on the stakeholder group least able to afford it, many of the students and their families (Taylor & Morphew, 2015). Presently, the cost sharing paradigm finds itself at a crossroad; the ability to raise tuition rates is now limited to a minimal amount per year, government funding remains at risk, and endowment income rests upon the performance of the financial markets. This situation is not

unique to the U.S. educational model, as many Western nations are confronting a similar set of variables (Carpentier, 2012; Bou-Habib, 2010).

Higher Education Response

Strategic management theory, as epitomized by the robust research of Michael Porter, has long hypothesized generic responses for industries undergoing disruptive environmental changes. Porter proposed that five forces determined the competitive position and ultimately the anticipated attractiveness of any industry. These forces, i.e., 1) the degree of competitive rivalry in the industry, 2) the threat of new entrants into the industry, 3) the bargaining power of the buyers of the industry's products or services, 4) the suppliers of the raw materials needed by an industry, and 5) the availability of substitute products or services for the industry's main output, determine the potential for the success of industry participants (Porter, 1980). Although not a complete panacea for understanding the competitive nature of every industry confronting every potential environmental jolt, Porter's basic model has been utilized or modified by a plethora of researchers over the past three decades in analyzing the strategic options for organizations in a broad spectrum of industries (Dobbs, 2014).

How would Porter's model describe the current state of higher education? Beginning with the first force, competitive rivalry is very high. Conversely, the threat of new entrants, a least in the traditional sense, is very low. The bargaining power of the buyers, i.e. the students, families, and employers of college graduates is high in most cases, given tuition cost pressures and the number of competitive options available to them. The bargaining power of suppliers, i.e. the secondary education system that provides students as well as the doctoral granting institutions which create the faculty, have more modest power but still influence the competitive position of the individual college or university. Finally, substitute products, i.e. online providers, trade schools, employers, even the military, have traditionally had relatively low but now increasingly growing power due to escalating tuition costs. Thus, it appears that higher education exists in a challenging environment in which the status quo is likely to undergo a great deal of change.

Recognizing that the existing educational model may not provide sustainability in the 21st century, colleges and universities have already begun to modify the educational model. Perhaps the keystone variable that supported this change has been the emergence of the internet. As early as 1996, the creation of a virtual campus anchored by the internet has been proposed, although not always as a positive change (Weber, 1999). Regardless, the explosion of the internet delivery system, anchored by the for-profit segment of the industry, is unquestioned, as universities and colleges attempt to attract the ballooning non-traditional student cohort (Hanson, 2014; Hill, 2012). The result has been a proliferation of educational strategies with titles such as "ad hoc online courses and programs", "fully online programs", "school-as-a-service", "educational partnerships", "competency-based education", "blended/hybrid courses, the flipped classroom", and the ubiquitous "MOOC" (massive open online course) (Hill, 2012). Although no consensus on the exact model to follow has emerged, higher education is clearly embarking upon the type of disruptive change which so many other industries have endured when confronted with the same rising costs, loss of public support, and technological innovations that higher education is now experiencing (Schejbal, 2012). So, given these environmental jolts, what changes to the organizational structure of the American university will emerge in the 21st century? The reconfiguration which has occurred in the U.S. healthcare industry, with particularly emphasis on the hospital sector, may provide the roadmap for the changes that the higher education industry will experience.

The U.S. Hospital Experience

There is a virtually limitless research stream chronicling the upheavals and structural changes that have occurred in the U.S. hospital system over the past 35 years, especially in the financing and delivery of healthcare services. Eerily, many of these modifications and the underlying factors that promoted these changes have strong parallels with the current state in which higher education finds itself.

Historically, hospitals faced a benevolent environment characterized by little competition for resources. A mixture of massive government spending, the growth of health insurance, and technology-

driven innovation created the modern hospital that anchored the unique U.S. health care system that became both a highly effective but costly curative machine. The government, primarily at the federal and to a lesser degree at the state levels, functioned as an exogenous variable that sought to co-opt the hospitals, as well as the doctors practicing medicine at these facilities, into a more cost-effective structure, using both competitive and regulatory strategies to limit health care expenditures. Three distinct periods of change emerged, as the hospital industry responded by adopting structural changes that satisfied these environmental demands.

In the first period, ever-increasing amounts of public resources were reallocated to upgrade hospital facilities which were allowed to deteriorate during the years between the start of Great Depression and the end of World War II. The 1946 Hill-Burton (Anderson, 1985) and National Mental Health (Sharfstein & Koran, 1990) Acts created funds for acute care and psychiatric hospital construction. Private health insurance also grew rapidly, as collective bargaining agreements negotiated during and after World War II used health benefits in lieu of salary increases (Kovner, 1990). Finally, the Social Security Act amendments of 1965 created the Medicare and Medicaid programs. The result: by 1965, health insurance covered 40% of hospital costs, with government programs funding an additional 50%. With the consumer only responsible for 10% of costs, demand grew, as did the number of hospitals and related technologies. By 1980, healthcare consumed 9.5% of GDP (Anderson, 1985), a figure which rose to 12.1% by 1990 (Burner, Waldo & McKusick, 1992).

Enter the second period. The unexpected growth in healthcare expenditures caused the government to incorporate regulation as a cost control device. Health planning laws, more restrictive Medicare and Medicaid amendments to the Social Security Act, and federal funding for managed care organizations began in the late 1970s and throughout the 1980s (Thorpe, 1992; Warner, Holloway & Grazier, 1984). The goal of these activities was to lower the cost of care. Hospitals addressed these environmentally-induced reductions in revenue by using cost cutting activities such as layoffs followed by vertical integration strategies in which hospital structures evolved from stand-alone facilities into multi-hospital systems.

Overall health care costs continued to rise however, which ushered in the third period. The 1980 presidential election witnessed a pro-competition flavor return to public policy, as the regulatory ideology of the 1970s and 1980s gave way to deregulation designed to allow market forces to dictate healthcare system structure. Most dramatically, the Medicare Diagnostic Related Group (DRG) payment system implemented by Ronald Regan in 1983 radically altered the hospital financial environment (Luft & Morrison, 1991) and initiated the rapid growth of managed care from Medicare and Medicaid to virtually all health insurance plans. Technology jolts also affected hospitals, as increasing numbers of illnesses became treatable in non-inpatient hospital settings. The erosion of hospital profits demonstrated that the environment no longer tolerated business as usual (Meyer, Brooks, & Goes, 1990). Hospitals responded by developing or copying radical changes to their organizational structures that have created the hospital system that is in place today. Now able to pursue non-traditional options due to industry deregulation, hospitals restructured from free-standing entities into systems modeled as a continuum of care in which the access to the patient was maintained throughout the entire range of health care needs, from pre-hospital, to hospital, to after-hospital levels of care. Because of this restructuring, the industry saw hospital closings, large declines in inpatient usage, a sharp rise in outpatient services, new methods for delivering emergency and long-term care, the growth of outpatient technologies, and an increase in payment options (Sabatino, 1989, 1990, 1991, 1992; Sabatino & Grayson, 1988). As a result, the number of acute care hospitals dropped from 7156 facilities in 1975 to 5627 hospitals in 2014, a decrease of 21.4%, with occupancy rates declined from 76.7% to 64.8%, a 15.5% decrease during this same period. Additionally, hospital admissions dropped from 36.1 million to 34.8 million while outpatient visits increased from 254.8 million to 802.7 and, not surprisingly, the average hospital size decreased from 204.8 to 160.3 beds as hospitals redeployed assets to satisfy the growing demand for outpatient care (National Center for Health Statistics, 2017, pp. 302, 309). The home health care industry has become a main beneficiary of this shifting demand, as payment mechanisms favor care provided in lower cost delivery settings (Kacik, 2017).

Another structural dimension that has experienced a dramatic change is the for-profit segment of the industry. Although historically comprised of only a very small number of primarily physician-owned hospitals, the passage of the Medicare and Medicaid legislation in 1965 fueled the entry of hospital management companies into the industry, with these hospitals consistently representing approximately 18% of all facilities and 15% of total hospital beds (National Center for Health Statistics, 2017, p. 309). A shift has occurred, however, in which a consolidation among the hospital management companies has eliminated many of the smaller competitors. Additionally, the number of services provided by these facilities has been reduced from full service to select, more profitable healthcare specialties, which has led to questions about their impact on the full service, non-profit community hospitals (Sultz & Young, 2009).

Even more dramatic has been the evolution of the health care system, a comprehensive, coordinated network of physicians and healthcare providers, with the hospital as one participant of the alliance. Defined as an alliance of at least one hospital and one group of physicians providing a full range of services, there were 626 health care systems in the United States in 2016, representing 69.7% of U.S. hospitals, 88.2% of hospital beds, and 91.6% of hospital discharges. Additionally, 44.6% of primary care physicians are in health care systems (Agency for Healthcare Research and Quality, 2017). These patterns are expected to continue in the 21st century, as the organizational structure of the industry continues to emphasize the expansion of healthcare systems in which the hospital serves an anchor for patient access to the complete range of healthcare needs, products, and services.

CAN HIGHER EDUCATION LEARN FROM THE HOSPITAL INDUSTRY EXPERIENCE?

Role of Institutional Theory

Given that an almost identical pattern of environmental jolts has occurred in both the hospital and higher education industries, is it reasonable to propose that colleges and universities will follow a similar organizational response as experienced by the U.S. hospital? Institutional theory is a linking mechanism that offers support for an affirmative answer. Specifically, the impact of isomorphism on organizational response has virtually mandated the hospital response pattern to the demands imposed by its environment.

Institutional theory has a long and robust history in organizational research, aligning response to isomorphic pressures. Isomorphism is a biological concept related to environmental adoption (Hawley, 1968). At equilibrium, an optimal physical form exists that matches the demands of its environment. Viable organisms adopt this form to attract resources. Hannan and Freeman (1977) extended this concept to organizational structures. Organizations become isomorphic, i.e. mimic structures that have successfully mastered the environment, because of the commonality of constraints encountered. Organizations lacking this structure are weaker competitors for resources or are eliminated by the environment (Oliver, 1988). DiMaggio and Powell (1983) cite three isomorphic types: a) coercive, the result of formal or informal pressures for compliance, b) mimetic, in which the traits of successful structures are willfully imitated, and c) normative, which are social or professional standards that shape structure. The result of these three pressures is the legitimizing of a prevalent, successful organizational structure that optimizes resource allocation from its environment.

Evidence of the impact of environmental forces in fostering systematic restructuring in higher education has been noted since the late 20th century (Zajac & Kraatz, 1993). More recently, institutional pressures have been noted in higher education studies in other countries as well. Reale and Seeber (2011) found that in Italian universities confronting resource and institutional priorities, isomorphic responses are possible when environmental pressures are clear and well-defined. Croucher and Woelert (2016), in a study of Australian higher education institutions, have concluded that structural changes in that industry are consistent with the isomorphism paradigm. Both studies note that there are likely variations among the disciplines within each institution, however. Thus, it appears reasonable to pursue predictions on U.S. higher education providers through the lens of institutional theory.

Linkages with the Hospital Industry

Both hospitals and higher education providers confront the same malevolent factors in their environments: increasing costs, decreased sources of revenue, eroding government and public support, and the appearance of non-traditional providers of competing or substitute products and services. In short, the unquestioned social value historically prescribed to both professions are now under challenge. Additionally, the isomorphic pressures that both industries encounter are strikingly consistent. The role of coercive forces is perhaps the least controversial and widely accepted isomorphic pressure. Multiple governments, professional associations, and private accreditation bodies wield powerful control on organizational actions. In many instances, failure to conform results in diminished access to resources. For example, hospitals that fail to maintain “voluntary” accreditation by the Joint Commission on Healthcare Organizations risk the loss of federal dollars, particularly Medicare funds. Colleges and universities face a similar outcome if they fail to maintain regional accreditation through bodies such as the Middle States Commission on Higher Education. The underlying logic that sustains this external pressure is the belief that society is best served by maintaining order within these organizations. Normative forces perform a related function. Both health care practitioners, i.e. the physicians, nursing, and allied health professionals that provide hospital services, as well as the faculty who teach in colleges and universities, are governed by a code of conduct exerted by the educational programs in which they are initially trained and socialized, as well as the professional organizations that provide the guidelines for their academic disciplines. Although the progression has been turbulent and not without controversy and major disagreements among its participants, the hospital industry has a three-decade track record of recognizing these pressures, abandoning past industry standards, and morphing its structure and practices to maintain organizational viability. Given the commonality of environmental and isomorphic experiences, the ability of the higher education industry to consider if not mimic activities that were successful in the hospital industry warrants investigation.

RESULTS: COMPARISON BETWEEN HOSPITALS AND HIGHER EDUCATION

Articles have been emerging in the academic and popular literatures that discuss the threats and hurdles confronting higher education. Many are one-dimensional in that a single aspect, such as rising costs (Borchardt & Pant, 2012; Sav, 2010; Popescu & Ciurlau, 2017), declining enrollment and the quest for non-traditional students (McWhirter & Belkin, 2013; Yang, 1997), decreasing public funding (Larrabee, 2009; McPherson, Schapiro, & Winston, 1989), and the globalization of the U.S. university (Brody, 2007; Hutcheson, 2011; Fischer, 2017) are addressed, but few analyze the problems from an industry-wide level of analysis. What appears lacking is an exploration of the higher education challenges from a prescriptive approach that utilizes outcomes from other industries which have developed strategies that allowed survival when facing the similar environmental jolts now challenging higher education. Given the relatively-short period of time in which higher education has actively begun addressing these challenges as well as the evolving characteristics of potential responses, any void in published research is understandable. Some predictions are possible by extrapolating the outcomes that have emerged in the hospital industry, which has an almost 40-year track record to examine.

The Higher Education Reaction: Initial Structural Modifications

Although the evolution is in its early stage of development, institutions of higher education have experienced several of the same industry-level outcomes witnessed in hospitals. In comparing closure statistics, 275 four-year institutions have closed since 1975 (National Center for Education Statistics, 2017, Table 317.60). Interestingly, 268 had private ownership while just seven were public colleges, attesting to the value that public funding and institutional size exert on organizational survival. With 24 closures, the 2015-2016 academic year saw the largest ever one-year total, a 243 percent increase from the prior academic year. The major focus of this decline came from for-profit colleges, largely those schools with low graduation and high student loan default rates (Belkin, 2017), as well as pressure from accreditors sparked by the I.S. Department of Education (Borges, 2017).

Regarding ownership, higher education has witnessed the same growth/decline cycle of a for-profit segment that the hospital industry experienced. In 1975, only 0.007 percent of four-year schools cited for-profit ownership; that number rose to 25.8% in 2012, the zenith for the industry, and sat in 2016 at 23.2%, representing a loss of 82 facilities (National Center for Education Statistics, 2017, Table 317.10). As occurred with hospitals, some investors have begun to pull their capital away from higher education into sectors with greater profit potential, but consolidation is also emerging. In 2016, Apollo Global Management LLC purchased Apollo Education Group Inc., the owner of the University of Phoenix, and added it to its international operations (Korn & Jamerson, 2016). In 2017, the Cappella Education Company and Strayer Education Inc. announced their plans to merge (Harris (b), 2017). Also in 2017, Purdue University surprised the industry with its purchase of the for-profit Kaplan University as a vehicle to expand the non-profit's online educational reach (Blumenstyk, 2017). This type of non-profit/for-profit marriage has likewise sparked controversy in the hospital industry, as the definition of ownership status became quickly blurred.

The shift in product mix may be the most dramatic initial reaction that higher education has made to its more challenging external environment. Like hospitals, universities have realized that the traditional mode of educational delivery, the classroom-based course, is under siege. The result has been the virtually universal acceptance, development, and delivery of a plethora of online offerings ranging from completely asynchronous to hybrid pedagogic combinations, utilizing an array of technologies including the internet, one-way and two-way transmissions through open broadcasts, closed circuit, cable, microwave, broadband line, fiber optics, satellite and wireless communication devices, audio conferencing, and video cassettes, DVDs and CD-ROMS (Wallis, 2016). Since 2003, the growth in student participation in online education has outpaced the overall student growth rate in higher education. In 2003, 15.6 percent of students reported taking at least one online course during their college careers; by 2014, this number has risen to 28.5 percent. In post-baccalaureate education, this number increased to 32.7 percent (National Center for Education Statistics, 2016, Tables 311.15 and 311.22). Although the annual growth rate peaked in 2009, online courses have continued to grow at a yearly rate of 3.7 percent since that time (Wallis, 2016), with little indication that of any abatement on the horizon.

Given the industry-wide impact of these outcomes and consistent responses throughout higher education, the institutional theory paradigm appears to be in operation just as occurred in the hospital industry.

DISCUSSION

What future structural changes may occur in higher education? Certainly, many of the activities identified in this manuscript are likely to continue. Interestingly, Hankin (1997), in a keynote address made in 1997, characterized the future of higher education as “in today, already walks tomorrow,” predicting that 21st century education would face diversity, including more older, female, and handicapped student cohorts; a more “practical and relevant” curriculum, including life-long learning, global interaction, service learning, and competency-based rather than academic major-based education; the increasing use of adjunct faculty; and the continuing evolution of technology as a teaching pedagogy, including the growth of online education. Twenty years later, Hankin's predictions remain accurate. Additionally, the perilous financial constraints confronting the typical institution of higher education in the forms of reduced federal and state governments subsidies as well as the volatility of endowment investments is an ongoing threat (Kurre, Ladd, Foster, Monahan, & Romano, 2012). Ever-increasing tuition expenses and the uncertainty of financial aid pose a similar risk for students to navigate (Orkodashvili, 2009). Predictions are fraught with uncertainty and unknown contingencies, but if the recognition is accepted that the status quo is not a sustainable business model for the higher education industry, then based upon the hospital experience, the following activities bear consideration.

Institutional Closings and Mergers Will Continue

Although painful to admit, the hospital industry slowly came to the recognition that over-capacity in its traditional product line, the inpatient delivery of health care, meant that facility closure was unavoidable. The industry has spent the past four decades grappling with the “right-sizing” process of determining the appropriate number and types of hospitals that are sustainable. Higher education has initiated this same process. Beginning in 2011, the State of Georgia has merged 14 of its colleges into seven facilities and has received inquiries from Pennsylvania, Connecticut, and Oregon for advice on doing so in their states (Gardner, 2017). The University of Wisconsin system has proposed merging its 13 two-year colleges into its seven four-year schools (Zamudio-Suarez, (2017). This trend is not limited to state-run institutions, extending to smaller schools that lack the endowments and financial reserves of many of their larger counterparts. Boston University and Wheelock College have announced the intention to pursue a merger (Harris (a), 2017). St. Gregory’s University, a private, 700 student college, will close in 2018 (Thomason, 2017). Marygrove College, a 966-student college, has announced that its undergraduate programs will cease operations in 2018, as the college will provide only graduate education (Hussain, 2017). While these early adopters have found that mergers are not a guaranteed panacea (Wieder, 2012), as has been the case in the hospital as well as industry in general, mergers, downsizing via program eliminations, and outright college closings can be expected to continue, as higher education leaders grapple with determining the appropriate number of colleges/universities that are supported by the existing resources bases.

Major Curricular Reformation

The traditional four-year, academic major-based educational model is now under fire. As occurred in the hospital industry, a great deal of dissatisfaction has been expressed regarding the perceived shortcomings in the present higher education delivery model. Although cost concerns may have initiated the debate, there are fundamental pedagogical questions now being raised by both students and employers about the skills mix received by our graduates. Today’s students are seeking more than a knowledge base that is specific to a single major, increasingly demanding the abilities to experiment, solve real-world problems, and engage across disciplines (Bisoux, 2017). The result is the call for interdisciplinary education. Joseph E. Aoun (2017), the president of Northeastern University, labels this type of curriculum “humanics”, a blend of data science, technology, the liberal arts, and empathy. Carlson (2017) describes the phenomenon as “systems thinking” which allows an individual to work and communicate across disciplines. The business community concurs with this approach and seeks newly graduated employees with critical thinking, problem solving, oral and written communication, collaboration, and teamwork skills over the academic major-specific functional literacy provided by the traditional degree program (Robinson, 2017). Professional schools have been early adopters of an interdisciplinary approach, offering hybrid programs that include two or more disciplines with the goal of creating graduates better equipped to confront the complexities of the 21st century world (Anft, 2017). Business schools have an existing track record in this area, in fields such as medicine and law, but interdisciplinary education also provides an option for the liberal arts to expand their disciplines into new collaborations with seemingly unrelated partners.

A second, related component of curricular reform centers around the call for updating educational skills post-graduation. Von Holzen (2005) predicts 21st century education will confront a “learning society” in which life-long learning will be required to pair the individual’s skill set with a rapidly evolving, technology-driven workplace. Traditional higher education can view this change as a threat, but in reality, it is an opportunity for a long-term relationship between employers and schools in which workers flow through competency-based learning scenarios, either on-campus, at the employers’ workplace, or on-line, based upon workplace skill and time demands (Robinson, 2017). The major task for the university may be the removal of the silo-mentality, which faculty are most familiar and comfortable, but stymies cross-fertilization among disciplines.

The Evolution of the Higher Education “Network”

Perhaps the most radical, difficult, but exciting challenge threatening traditional higher education is the realization that a new era is evolving in which the individual higher education institution will likely require participation within a network of other education providers, employers, and education-related stakeholders as a vehicle to survive in the 21st century environment. Hospitals reluctantly recognized and began this process in the 1980s and are continuing to build these networks to this day. The core of the hospital experience was the painful acceptance that all hospitals could not offer the complete array of potential healthcare services; the minimum volume of patients needed to assure acceptable levels of quality and cost of care was simply not available. The result has been the creation of the “healthcare system”, in which hospitals, physicians, insurers, employers, and a host of non-hospital caregivers have joined forces to provide and finance a fuller-spectrum of services than is possible as free-standing institutions.

Institutions of higher education, particularly the faculty in many cases, have yet to embrace or even accept the necessity to undertake this journey, at least to the mass extent that has occurred in the hospital industry. For many years, colleges and universities have opened satellite campuses and offered specialized, hybrid programs in the attempt to attract various student cohorts that are not adequately served by the present educational model. Joint degree programs between schools have long existed as well. Nothing as encompassing as the hospital experience has yet occurred; indications of the value of the system approach are surfacing, however. Labeled as the “networked university”, an organizational structure in which multiple schools share strengths as instruments for reducing costs while providing essential academic services has been proposed (Selingo, 2017). This joint approach is particularly promising for the smaller institutions that have been most susceptible to the recent wave of mergers and closures. Some activities among business schools have stimulated positive results as well. The Global Network for Advanced Management is an international alliance of 29 schools initiated in 2012 that shares courses and other activities which provide students with an array of courses and options not possible in any single one of its member schools (Snyder, Bach, & DePaz, 2017). The Quantitative Techniques for Economics and Management, an European-based alliance, has had similar outcomes (Shinn, 2017).

CONCLUSION

When faced with dwindling resources caused by a combination of rising prices, reduced insurance availability, and the resultant shifting of costs to the patient led to a consumer revolt which reached the ears of the federal government, hospitals reacted by creating a new organizational structure which required a downsizing of facilities, a new model for delivering and financing care, and the evolution of stakeholder networks. Higher education, confronting the same set of malevolent environmental issues, is likely to adopt a similar set of strategies. The first step in addressing each of these potential activities, be it mergers or closures, reforming the curriculum, or network building, is the recognition that, except for the relatively small cadre of truly elite institutions, 21st century higher education will require inter-organizational cooperation, including a pooled, shared asset approach, to optimize the dwindling resources that will likely be available to its practitioners. Confronting this challenge will require the death of the silo mentality which has long been institutionalized throughout higher education as well as its academic disciplines, replaced by an interdisciplinary approach which recognizes the need for life-long learning.

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