The Stewardship of Higher Education
Re-imagining the Role of Education and Wellness on Community Impact

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Understanding the entrepreneurial nature of universities—in particular, the relationship between education and health in relation to development and wellness of communities—this volume provides a description/narration of the efforts in how universities can address their shifting contexts while engaging their communities in social change. In the development of this book, we have explored how reforms in American higher education are impacting the role of universities and their faculty. Contributors were asked to imagine possibilities for research and outreach by providing salient examples of how higher education can lead and change how we view the role of health and education within institutions and society. Each author writes across common themes that address the problems and possibilities of higher education curriculum and projects aligned with the mission of stewardship. The authors highlight interdisciplinary approaches and projects for faculty work, modification of the Teaching-Research-Service expectations, and community initiatives that can emerge from real-life problems (to impact wellbeing) and create rich and deep research possibilities for practitioners to impact both higher education and society. The process and research approaches used by the authors include imagining the community as part of a process of the change and part of what changes, exploring how community change can build on the strengths of local people, and why community organization and advocacy should revolve around social learning and community capacity theories. Given the diversity of topics and approaches, as editors we have tried to honour both the authors’ words and style in expressing their opinions to provide a forum for the readers to envision stewardship.

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Re-imagining Universities as Places for Research and Reform

Introduction

Understanding the entrepreneurial nature of universities—in particular, the relationship between Education and Health in relation to development and wellness of communities—we would like to begin this volume with a description/narration of the efforts in economic development by colleges to address the shifting markets and economic failures. For example, after the collapse of the auto industry in Michigan, the University of Michigan has created efforts with the state and communities to address a green economic growth around technologies and new areas of research and growth; partnering in the creation—with Wayne State University in Detroit and Michigan State University in Lansing—of an economic and technological corridor that focuses on the needs of the communities and the ability to attract and develop both economic and human capital by leveraging the existing and developing structural capital in the corridor. However, in terms education and health—which Gallup has described as essential elements to community wellbeing (www.gallup.com/poll/wellbeing.aspx)—higher education has been slow to respond in adapting curriculum and research practices; and even less active in providing leadership within these essential elements (Schaefer Riley, 2011).

We have delved in the development of this book thinking about the reforms in American higher education—from federal financial aid laws to job placement and underemployment of graduates—that are seen as new markers of measuring the success of universities (Breault and Callejo Perez, 2012; Economist, 2012). One of the issues that have emerged from the current political and economic realities of post-secondary education is to enhance the degree of impact to which universities educate and care for their communities—as they choose to continue to promulgate through a model of efficiency and relying on market forces for direction of degrees, research and outreach (Diehl et al., 2011). The other issue has been created by our own inability to understand the banality of higher education itself, because of its focus on esoteric scholarship around national publishing and external funding rather than regional leadership and public outreach (Making Place Better, 2006). We see universities, administrators, and governing boards who make deals for external funding or to politicians who seek the approval of the public through controlling of
The organization of the book is created around two broad themes: 1) exploring health and wellbeing and 2) exploring education and wellbeing. In each, the writers are asked to see the possibilities or research and outreach by exploring their work to provide salient examples of higher education can take leadership and change how we view the role of health and education within the institution and society. Today, education and health are ensnared within a paradigm of efficiencies. To re/imagine possibilities in this book, we use Thomas Stewart’s (2001) tripartite conceptualization of intellectual capital. Stewart defines intellectual capital as being comprised of 1) human capital, 2) structural capital, and 3) customer capital.

This edited book addresses solutions in assessing the human capital (knowledge, skills, attitudes) of your faculty members more explicitly to incorporate Wellbeing into Health and Education fields by showing how to work with the professions, faculty, staff, and students. The authors in the volume approach wellbeing from the education and health professions. Each author writes about the problems and possibilities of assessing curriculum systems and projects that are aligned with the mission of stewardship and use interdisciplinary approaches and projects for their work. Concurrently, the authors address modification of the Teaching-Research-Service expectations within most higher education models to include skills needed among faculty to include projects, curriculum, and initiatives that can emerge from real-life problems (to impact wellbeing).

The process and research approaches used by the authors include the idea that the community is part of the process of change and part of what changes and speaking about new structures, norms, relationships that will strengthen the community’s problem adaptation and/or problem solving capacity. Some approach the issue of wellbeing through sustainability, a form of community change that can build on the strengths of local people (people in the field), recognizing that such people are already engaged in the development and maintenance of the community. Last, some of the chapters in this volume address strategies including community organization and advocacy, based on social learning and community capacity theories.

Common themes addressed across all chapters are that we need to have a clear understanding of learning goals/outcomes; relate these understandings to students; construct models that yield rich assessment data; incorporate assessment information into descriptive feedback to increase understanding of the learning experience and impact; adjust teaching, goals, objectives, and outreach approaches based on findings from ongoing research; and work with communities to initiate some metacognitive processes to articulate the impact of knowledge creation and production. Given the diversity of topics and approaches, as editors we have tried to honor both their words and their style in expressing their opinions.
Impact and Higher Education: The Role of Impact as Service and Research

Traditional university responses based on research and service impact models typically have provided a set of standards based on short-term goals that seek to respond to pre-determined skill- and content-based problems (Tuchman 2009). The dominance of such models for research and service are pervasive in higher education and based on narrowly defined ideas of change and reform—seeking to align performance on research and service to income and deliverables (e.g. jobs for graduates in industry, economic development, research and development for industry, etc.). This model then serves to create an avenue for economic development to adjust to and work with changes that are driven by the needs of industry and not society (Geiger and Heller, 2011). In areas of education and health, change is much less related to wellness than to generating research and contract dollars. With apologies to Charles Dickens, it is the best of times; it is the worst of times. It is an age of unprecedented spending for program growth; it is an age of record budget deficits and cutbacks. In countless universities across the US, new programs have risen to replace traditional ones and accommodate a growing number of students (Tuchman 2009). Yet, a faltering economy has put the squeeze on operating budgets and has made constituents less likely to support dedicated spaces and projects required to sustain these programs (Holley, 2009). Thus, construction of these spaces is above all tied directly the ability to generate income. So, as programs and alternatives open at record pace, new graduates continue to fall behind because these programs are inadequate and unsupported.

In higher education, the push for improving the quality in educational outcomes needs to be more than just a question of aesthetics of programs and curriculums. In the arguments made by higher education reformers, research and service have been cited as keys to educational change – thus the key programmatic change that leads to learner outcomes has to be grounded in the relationship between the aesthetics of programs, institutional support (physical and philosophical) and measurable outcomes that address both the social and economic needs of the community the graduates will enter. Whether your argument is for or against higher education, little and no discussion is articulated as to the purpose or degree of impact (Arum and Roska, 2011; Twitchell 2004). The discussion on articulation, when it occurs, is usually products-based tied to Return on Investment (ROI) (that fits economic development for profit); which has emerged from management literature that seeks to create a single process for change that can easily be measured and re-adjusted to deal with the changing contexts (Levine, 2000; Robinson, 2001). We propose that this single process model—which has led American manufacturing to its full collapse—is based on the ability to grow and profit from change (Egan, 2008). Ken Robinson (2001) has written that this Industrial Revolution model has driven education and training is hampered by archaic ideas of intelligence and creativity that has wasted the potential of countless numbers of human beings (Eisner 1979/2008).
What we hope to convey in the chapter of this volume is that muddy conceptual foundations of research and outreach and, therefore, the role of the university that permits eclecticism in research and framing of problems for thinking about the stewardship of higher education should be driving research and outreach (Bennett et al., 2012). Instead, these problematic and muddy conceptual foundations prove to be too complex for a world that provides deliverable based on ROI (i.e., doctoral research programs which are deliverable output model of reach funding, that do not prepare faculty to become active participants in community stewardship) In response to this problem we propose a conceptual framework of stewardship in higher education for educational research that moves beyond location and labor to focus on historical-spatial identity of the institution (Callejo Perez et al., 2004). We propose a conceptual approach to stewardship to re/create a sense of what research and reforms might mean for universities and their communities, while allowing the institution to both remain grounded in their mission – whether they are a research or comprehensive university – and adjust to the changing nature of the marker and their students. For example, we hope that the readers like us look at models such as those put forth by Nancy Cantor, Chancellor of Syracuse University. Regional and national trends in economics and research and development shifted drastically over the past 20 years, forcing both upstate New York and Syracuse to re-examine their roles. Traditional responses to both economic and social changes that had benefited the region and the university no longer applied. Thus, the institution had to shift to a new approach in order to both survive as a research institution and shepherd its region in the changing climate. They chose Scholarship in Action as a core for the University serving as an anchor institution to both benefit the region and ultimately the institution and its graduates. The approach has its roots in the following vision and strategies:

“Scholarship in Action” captures a vital, historical strength of the Central New York region and the City of Syracuse, as well as the University. Our region has a treasured history of social innovation, having played a key role in abolitionism and the women’s rights movement.

The process of adopting Scholarship in Action as our vision was organic as well. Chancellor Nancy Cantor dedicated her inaugural year to the theme “University as Public Good: Exploring the Soul of Syracuse.” All of SU’s stakeholders were invited to share their reflections on our “strengths” and aspirations for our future—from students, faculty and staff members to alumni to friends of the University to members of the local, regional, and global communities.

The many activities of that reflective year revealed profound thoughts and feelings, from which two very clear messages were distilled: (1) universities
today must connect more tangibly with their communities and (2) Syracuse University, in particular, is remarkably well positioned to do so. Scholarship in Action is a faithful translation of these messages, a bona fide expression of the identity, which the Syracuse University community aspires (www.syr.edu/about/vision.html).

The envisioning process based on regional stewardship—in this case being a community anchor—allows the institution to imagine the robust sense of place for research and reform that local landscapes could encompass and sets forth a plan for change that allows the institution to continue to remain globally competitive. However, a persistent question that continues to vex researchers and stakeholders within higher education is the question of what counts as scholarship in this new model? There seems to be no shortage of definitions and arguments about what counts as scholarship and outreach (Bloomgarden, 2009; Fitzgerald et al., 2010; Misra et al., 2011; O’Meara, 2002). This problem in constructs results from two interpenetrating sources (Slaughter and Rhoades 2004). The first is empirical, or what we take “out there” to be scholarship and outreach. The second is a problem of language and language games employed to account for this empirical world. The narrow focus of doctoral program deliverables may limit a Ph.D. student’s preparation for a faculty position within certain academic environments. The doctoral degree deliverables are frequently defined by the faculty advisor and may often focus solely on research production. The emphasis for doctoral student success is placed on deliverables such as the number of presentation, publications, and grant applications. There is substantially less focus on deliverables related to teaching (e.g., student evaluations, effective pedagogical methods, student achievement) and service (e.g., university and departmental committees) including community stewardship. This may result in a lack of preparation for the rigors of the professoriate, especially when working at an institution emphasizes teaching and service.

Problems in Defining Institutions and Their Roles

In addition to geographical and demographic definitions of institutions and their missions, there are questions as to the traditional (and stereotypical) roles of universities in their communities. Overall, higher education in the US during the industrial period was characterized as a systematic attempt on the part of educators to address the increasing educational needs of the ever-growing population and workforce. Within this context, higher education became vested with the social, economic, and political responsibilities of society moving from regional economic dependency to a globally competitive power (Slaughter and Rhoades 2004). Additionally, in the 1960s, with the explosion of student populations on university and college campuses; coupled with the demands of post-World War II baby boom; civil rights for minorities, women, and the working class; and most importantly the place of the United States in world affairs caused higher education to embark on a new direction (Gutek, 2000).
Among the many important steps taken during this period, Gutek argues, was the 1946 President’s Commission on Higher Education appointed by Harry S. Truman, which pointed to a general direction of higher education. Conclusions based on this report called for a higher education that promoted equality of opportunity for everyone (p. 14). The report also called for a new role of States in shaping the course and direction of higher education. According to Gutek, prewar planning of higher education was uncoordinated, unplanned with each institution responsible for its own curriculum, policy, and program development. Hence, the report called on individual States to be responsible for the coordination, growth, development and expansion of all educational programs. This responsibility according to Gutek transcended higher educational institutions to strategic planning and coordination in 1970s, especially among public institutions. Results of this coordination were powerful, such as the founding of urban institutions with charters to provide high quality education to the children of working class families (i.e., Virginia Commonwealth University, Florida International University, and University of Texas-San Antonio); and expansion of others (i.e., Wayne State University, University of California-San Diego, Georgia State University) to increase research for the betterment of population. The above, along with the growth of higher education as both a producer of applied knowledge and workers has led to the current state of higher education, where institutions re-branded themselves to increase prestige and extended themselves beyond their charters and missions (Adair Breault and Callejo 2012; Brewer et al. 2001; Kerr 2001). Additionally, the commission recommended increased federal scholarships for undergraduates and graduate students based on economic and social needs as well as academic performance, which was the foundation for the enactment of desegregation laws and banning of discrimination in admissions and enrollments (Gutek 2000; Levine 2000; Trow & Burrage, 2010).

Universities and colleges have always been seen as the highest institutions in the educational ladder. They were not only tasked with the responsibilities of serving the increasingly diverse and varied public, but also to meet the challenges of a new technological and scientific era (Bok 2003; 2006; Kerr 2001). However, the onset of a technological and scientific period launched by the space race in the 1950s, the US government asked universities to be responsible for the advancement of the United States in these important fields of technology and science.

This created a unique obstacle for determining what higher education is and might be when trying to address stewardship. Universities, many of which were built to enhance regional development, moved away from their mission to address the larger global economic and security charge of the federal government that was both enhanced by prestige and federal dollars (Goldstein et al., 2011). Ironically, many of these institutions originally built for the readily evolving nature of community stewardship were not ready for the shift back toward regional stewardship that followed the end of the Cold War, and the rapid technical explosion of the 21st century. What occurs is that the relationship between higher education and society is embedded in an institutional context that sustains an educational and pedagogical
culture that is remarkably uniform across time and place (Arum and Roska, 2011; Hersh et al. 2006). Knowledge in this general framework of higher education is treated as information, in discrete pieces that come more or less preformed, to be delivered by professors/instructors; and students presumably take in what is presented to them. Delivered in discrete bits, this is easily tested for and readily controlled for certainty’s sake, and taken as a proxy for student learning. This view is so common that it represents common sense to faculty, families, administrators and students that it is just the way it is.

The forging of a nation is a dynamic and organic process that combines an experimental form of government, an ever-changing society, immigrant citizens and a unique concept of law (Wiggin, 1962). John Dewey observed that:

Even where science has achieved its most attentive recognition, it has remained a servant of ends imposed from alien traditions. If ever we are to be governed by intelligence, not by things and words, science must have something to say about what we do, and not merely about how we do it most easily and economically (Dewey, 1910, 127).

Ironically, schooling at all levels—from elementary to higher education—lost much of its autonomy in daily decisions over the education of the community. Instead, the federal and state governments became the most important forces in shaping both local policy and practice, either through funding or legislation. At the same time, higher education faces increasing economic uncertainties and extensive social change, including declining economy, de-industrialization, aging facilities, diversity, poverty, and changing markets. Subsequently, higher education has failed to take into account the uniqueness and complexity of contexts as potent resources for the improvement of curriculum, teaching and instructional policy. In an era of change and accountability, higher education must help students harness the resource potential of their life and culture to foster curriculum, teaching, and educational policy responsive to changing communities, populations and their concerns (McKee and Eraut, 2012).

RECONSTRUCTING THE STEWARDSHIP OF HIGHER EDUCATION:
ANCHOR INSTITUTIONS

The need for new leadership in economic development in the US, beginning with de-industrialization and competition in knowledge economy from competing markets; has forced a change in regional ideology and social structures that drove growth over the last 100 years. However, continued uniformity within higher education—driven by benchmarking—has led many institutions to go to considerable expense to match materials to their peer institutions in hopes of influencing their rankings among peers (i.e., US News and World Report) (Gumport & Snydman, 2002; Hacker & Dreifus, 2010; Wildavski, 2010). Important to our argument is that while the organization of universities and their cultures of teaching, research, and outreach are virtually
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identical, or at least fundamentally uniform, we do not believe that this requires a uniform or standardized response to addressing stewardship. Precisely because of the diversity of institutions and their communities, we hold that standardization is not an appropriate response. The sheer diversity of place—the historical, physical and philosophical space occupied by the institution—would suggest to us that the solution must be local not general. The context of community, local and regional culture, family lives and so on, would direct us to non-standardized institutions; to emulate the standardization movement that is at the core of higher education (e.g., benchmarks based on peers) is wrong-headed precisely because it is designed to ignore local contexts. Hanging on to practices that are intellectually limiting, however “effective” they have been in the past, or engaging in some futile attempt to emulate the decontextualized accountability schemes that are pressed by the benchmarking movement, may hasten our own demise (Hersh et al., 2006).

**Professionalization and Outreach: Where do Faculty Fit?**

Higher Education needs to set a vision that is now absent from the public sphere. We need to emphasize that good education is more than training and practice for gainful employment. Education is full participation in our communities, state, nation and world (Weisbrod et al. 2008). We must hold forth that vision of universities where future graduates explore not only their profession, but also political issues, and engage in meaningful curriculum where their sense of citizenship is based on important aspects of what it means to be engaged within a community. We must prepare graduates whose practice is such that employers recruit and brag about hiring them not because they can perform a task but because they are engaged in public discourse. We need to teach skills and knowledge for them to be excellent practitioners who self-reflect on practice, their profession, engagement, and continuous learning.¹ Curriculum needs to reflect our both our philosophy to reflect a synergy between expanding notions of research and practice that create contexts for future and current practitioners through engagement in stewardship.

However, in higher education, we continue to use an outdated and untenable model of the role of the professor (Adair Breault and Callejo, 2012; Anderson 1996; Boyer, 1990; Kimball, 1990), which is driven by vacuous relationships among research, teaching and service for the increase of prestige for the institution and the professor through external funding and esoteric publishing. These misconstructions of the outputs of higher education have led to our pursuing the wrong ideals. What we need to focus on is the expansion of stewardship as a driving force of research and teaching (see Syracuse example above); which in no way means that an institution become less rigorous or violate its mission—instead it asks that as a body the professorate and the institution look at what they are actually contributing to both the profession and their communities. The one major obstacle is that even though many in the professoriate are beginning to understand the broader implications of research and teaching as it impacts stewardship; the public (including policy makers) continues to
narrowly define higher education in static terms long after we have abandoned them (see Boyer, 1990).

Additionally, this is a tough topic to address, since many within the professoriate are not interested in discussing the role of the university and the professor in stewardship—specifically the relationship between the institution and its communities. Few faculty have devoted serious time to what their institutions really are about or what their role as faculty within those institutions should be (Adair Breault and Callejo Perez, 2012; Allen, 2002; Boyer, 1990).

LEADING THROUGH STEWARDSHIP

While university service cannot be avoided, it can be mitigated with proactive measures, innovative use of personnel, and diligent pursuit of the larger institutional aims (Zemsky et al., 2005). What can leaders within higher education do to promote stewardship among its faculty? First, it may include rethinking the use of faculty and staff to relegate more tedious documentation for accrediting agencies to someone specifically hired for those purposes in order that faculty may engage on teaching, research, and scholarship in a meaningful manner. Second, when faculty members are engaged in service, institutional leaders within need to ensure that the work is generative and promotes a greater sense of community and professional growth among faculty and staff that will impact the quality of their programs as well as the professional growth of their faculty and staff. Third and essential to the spirit of this book, is how institutions can move beyond the rhetoric of stewardship to actual practice through the changing of guidelines for what counts as research, teaching, and service. When an institution claims to be a regional steward, it must exercise meaningful action to support faculty involved in that work (e.g., University of Denver Promotion and Tenure Guidelines). In no discussions within this book, do the editors or writers speak to the diluting of the rigor or worth of scholarship (research) and knowledge (teaching); instead what we promote are alternatives to that production of research and teaching that are grounded in stewardship (the role the university plays within its communities).

Therefore, we need to envision, create, and sustain multiple organizational spaces in order to mitigate intensification, develop a comprehensive system of professional support, through the development of operational spaces to help professors focus on the more intellectual nature of their work and thus positively impact outreach that promotes innovation, within a culture of transparency that promotes effective operation and governance that supports the mission and aims of the institution (Arum and Roska, 2011). Leaders should develop and support normative spaces in which faculty can address the aims of the university and envision curricular and instructional innovations to support those aims. This space should be tightly coupled wherein units recognize their relationships with one another and explore interdisciplinary possibilities within and among their programs. Within this space all stakeholders have the most to contribute, and as such, should be the most engaged.
SUMMARY OF CHAPTERS

The book is divided into three sections that seek to examine stewardship from the macro level to the human level. The three sections build on specific arguments that ultimately attempt to look at the role of stewardship in higher education. The chapters highlight individual reflections on the qualities of successful stewardship in higher education, specifically around Education and Wellness. The engaging research and creative essays respond to the political, cultural, and economic issues surrounding the current nature of higher education and its role in the community at large. As editors, we believe that a “good steward” fosters active engagement in reflection on all elements of university work—the intellectual, advisory, and pedagogical work of faculty, curricular opportunities, as well as the intellectual work that drives research and theory in our respective fields. In this volume, we hope that the chapters help the reader to re/imagine the role of the university (and their representatives) in education and wellness through essays that highlight research and outreach; pedagogy; reform; access; and policy. We ask that readers imagine possibilities of higher education in the areas of education and wellness by exploring the chapters, which we believe provide salient examples of higher education taking leadership and changing the vision of education and wellness within our institutions and society.

In this first section, the authors provide specific and powerful analysis of the role of understanding Stewardship and its impact—especially the power of measurement and its results—whether these are in assessment of learning or finance or programmatic or in career choices. The section seeks to provide an understanding of how stewardship is dependent on decisions and choices made across higher education; and that those choices have real consequences for those involved in higher education. Sebastian Diaz in *The Tie that Binds Us* explores how the holistic intersection of advances in data management and technology—when combined with a heightened focus on accountability—promise to uncover connections in the educational enterprise, and connections that have in the past been ignored intentionally and/or unintentionally. In *Re-Imagining Higher Education Funding*, Anthony Bowrin discusses strategies that could be used to revolve resolve the funding crisis facing higher education and which threatens its long-term sustainability. First defining the nature of the funding crisis and identifying the major factors that have led to the present funding dilemma facilitate this objective. Given the complexity of the subject of higher education finance, a few assumptions are necessary to keep the discussion manageable. Courtney Meanuff and Lisa Ambrose in their chapter, *Re-imaging the Role of Education and Wellness on Community Impact*, celebrate the American higher education system as they ask about the difficulties it currently experiences—from negative stories about the economy to the true academic mission to differing responsibilities for public and private universities to access to education as a public or private good. Included in these discussions is the role of universities (both flagships and regional) in preparing low income and minority children to be productive, fulfilled, employed adults and role of quality education for all students;
and ultimately whose responsibility it should be. Last, in *Taking their Lives into their Own Hand*, Cyprien Lokko, writes a commentary on the role that intrinsic interest plays in the academic journey of students against the backdrop of college major choices to decipher how the concepts of financially rewarding jobs, familial or peer influence and or intrinsic interest affected students’ choices of academic majors.

In the second section, the chapters build on the propositions of the first section by focusing on specific issues within higher education, which address the focus of the book regarding the role of stewardship in education and wellness. These specific cases seek to point to the power of interdisciplinary study, examine inclusion of stakeholders to solve community issues, question the purpose of education, and ask we look at diversity and at our own role within diversity. First, Susan Albertine asks, *Can Monarchs make it through Texas?* In her chapter, she attempts to guide the reader through her understanding of stewardship—stewardship in education and wellness. For the author, higher education needs to be much more intentional, more collaborative, and more active in applying knowledge and skills from all disciplines and fields to address grand challenges like the monarch migration. She concludes that we cannot find answers to big questions if we approach them as problems to be solved in isolation, addressed as discrete scientific tasks. In *Pursuit of the “The Good Life” or “The Good Job,”* Kevin Cloninger argues that the ultimate goal of all education is to help students learn how to live well. He insists that instead of focusing on how to help students live well, universities and schools are centered on preparing students for the global economy. The poverty of this approach, he argues, is inadequate, as he offers solutions from a non-profit educational focus. In *Culturally Relevant Pedagogy and Its Implications,* Dawn Hinton and Byung-In Seo write that equitable access to education has been an issue for decades in the United States, and especially true in higher education where minorities and persons of color face obstacles that are exacerbated by state and local funding of primary and secondary education. This lack of preparation causes many minority students to enter the university only to drop out early in their college careers. The chapter discusses culturally relevant pedagogy, and explains its relationship to the retention of minority students in Predominantly White Institutions. The authors provide recommendations for universities and their faculty to consider while promoting learning. In the next chapter, Thomas Gallagher argues in *Building Community Capacity to Guide University Stewardship* that a model developed in Oregon serves as an approach for university stewardship to serve the community, where the community must guide it. He argues that for the community to offer guidance it must have its own house in order, having a strong and diverse base of community leaders, strong community organizations that harness the power of people working together, and community-wide collaboration working toward a common vision of the future. He concludes that capacity at these three systems levels — leaders, organizations and collaborations — gives the community the ability to be an effective partner. In the last chapter, *Non Nobis Solum (Not for Ourselves Alone),* Dorothy Squatrito Millar leads the reader through a powerful argument that builds on the definitions of
the qualities of successful stewardship in higher education, building on her interests and research agenda that addresses efforts to support youth and young adults who have moderate and severe intellectual or developmental disabilities in their journey to becoming self-determined and self-sufficient with the overall aim that they enjoy a quality adult life. The central argument in her chapter relates how universities and their representatives should address ways of ensuring individuals, particularly people with moderate and severe disabilities, are respected and valued, as well as being treated with dignity.

The final section, the three chapters offer a set of narratives—personal and powerful—that highlights stewardship is indeed a very personal and human experience. In Aquí Estamos y no nos Vamos, Nancy Guarneros offers the reader a critical counter story of an Undocumented Graduate Dream Activist through a powerful in depth interview with an activist student to provide the reader a narrative that allows them to better understand the intersection between bring a political activist and a student. In A College Degree with a Sense of Community, Samantha Danbert, a PhD student recounts her journey through her Bachelors of Science in Exercise Science. Her co-author, Alicia Flynn, a science teacher in the Swan Valley School District in Saginaw, Michigan, who completed her Bachelors of Arts in Secondary Education joins Danbert in guiding the readers through two reflective intertwined essays that encompass a vital meaning of university stewardship; the impact of a University’s commitment to community stewardship on the educational growth of its students. In the last chapter of the narrative section, Joshua Ode and Dawn Coe recount their journey from graduate program to faculty in Higher Education and Community Engagement. In this narrative of a common path, the authors allow the reader see their experiences through the masters and PhD degree—which occurred not concurrently by sequentially. They highlight this journey for the reader because like them many faculty experience similar trajectories. The authors highlight how an incredibly similar educational experience can result in obtaining different professional jobs and differing academic career paths. Despite these different career paths within academe, community engagement is not only a commonality, but also an essential component of the profession.

NOTES


REFERENCES


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SECTION I

ANALYZING STEWARDSHIP AND ITS IMPACT
SEBASTIÁN R. DÍAZ

1. THE DATA THAT BIND US

Finding Our Hidden Wholeness in Education

INTRODUCTION

My family and I left Cuba in 1968. Since I was only three, I was unaware at that time of the complexities inherent in being part of that Diaspora, the brunt of which my parents bore in a dignified fashion while my brothers and I enjoyed the respective innocence of youth. Like most Cubans who fled during the President Lyndon Johnson administration, we left behind bitterness and resentment, not only with our government, but also with our very own family members. Almost 30 years passed before my return there, and in that time, Cubans here in the US and back in the Fatherland had further widened the divide between opposing ideologies.

On a trip back there in 2001, I was at the beach at Varadero with my sister and her friend, both who live there still. Wearing only simple black swim trunks and no name-brand apparel that would reveal me as a Gusano, I crossed the street next to the beach to buy a few beers. A young man hawking ornate handmade boomerangs sparked up a conversation with me. “Where are you from?” he asked me, cycling through the typical assumptions. “Mexico?” “Spain?” “Italy?” Finally I answered him honestly and calmly, revealing my own identity as an exile, “Yo soy de aquí. Nací en Pinar del Río.” His face transformed itself, almost grotesquely, as did his formerly friendly disposition as he struggled with his disbelief. He yelled at me angrily at the top of his lungs, jabbing an accusatory finger in my direction, “Tu?! Tu mas nunca eres de aquí!” (You?! You will never again be from here!)

In that moment, I was shocked by the visceral reaction of this embittered Cuban. I never realized the hatred could be so strong. Yet upon further reflection on the flight back home to the US a week later, I put in perspective the boomerang salesman’s reaction. Fundamentally, it wasn’t all that different than so many of the experiences I’d had since arriving to the US. There were the kids in elementary school in Elizabeth, NJ, who made fun of the cheap sneakers the other immigrant kids and I wore. They taunted us daily by singing, “Mickeys, they make your feet feel fine! Mickey’s, they cost a dollar ninety-nine!” There were the Future Farmers of America (FFA) at Colonial High School in Orlando. Decked out in their blue corduroy jackets, and bussed in from the then-rural community of Bithlo, they reminded me regularly that as a Spic, I had no business being interested in agriculture, even if I had spent my summers in high school working as a farmhand in Ohio. Then there

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were the accusations from my own fellow Cuban exiles here in the US that I was a Socialist, a Communist for openly admitting the limitations of Batista’s dictatorship (the previous sentence is confusing to me). And to round it all out, my fellow Cubans back in the homeland continue to accuse me of being a bourgeois imperialist capitalist for defending the benefits of US capitalism and its respective policies.

I often wonder about those kids from the projects in Elizabeth, NJ. I imagine that for many of them, their cool Chuck Taylor footwear did little for the serious challenges of growing up in the poverty of the urban projects. And I imagine that some of those FFA boys from Bithlo discovered eventually that farming wasn’t even a realistic option for them. For those who were able to find careers in farming, they eventually had to deal with people and products and seeds produced by foreigners throughout the world. As for the Cubans, the ones on the north side of the Straits might be realizing that after 50 years, it’s becoming silly to continue proclaiming every New Year’s Eve, “Next year in Havana.” Meanwhile, the stalwart Castro supporters are jumping ship and abandoning, in droves, their glorious revolution, thus adding to the ubiquitousness of the Cuban Diaspora throughout the world.

Some say that humanism is nothing more than the simple recognition that life as a human being is difficult. Given that life is inherently difficult, we make it much more so when we ascribe to fundamentalism, which according to the late M. Scott Peck (1997) is related to a need for simplism. That need for simplism often manifests in false dichotomies (such as the dichotomies that the author described above?). And false dichotomies are the result of dogmatic ideology. They are the archenemy of truth and discovery, two major aims of our collective research as academicians. As the contemporary Latin American singer Ricardo Arjona reminds us through his song:

Es que las ideologías dividen al hombre.
El amor con sus hilos los une en su nombre. (Arjona, 1996)
[Ideologies divide humans from one another; and love uses its threads to bind them together.]

Consider a more literal corollary offered by the late writer and Trappist monk Thomas Merton. In separating himself from the other monks at Gethsemane, he discovered a remarkable paradox. Ironically, the reflection in solitude at his hermitage ultimately prepared him for the discovery of what he referred to as “a hidden wholeness.” Outside the confines of his abbey and hermitage one day, during a daytrip to nearby Louisville, Kentucky, Merton made the connection:

…the conception of “separation from the world” that we have in the monastery too easily presents itself as a complete illusion…We are in the same world as everybody else, the world of the bomb, the world of race hatred, the world of technology, the world of mass media, big business, revolution, and all the rest (Merton, 1966, pp. 140–141).

So you might be wondering by now, what does a book chapter dealing with data, technology and accountability (written by a statistician, of all people) have anything
to do with a touchy-feely discussion of love and coming together to find our own wholeness? Actually, it has everything to do with it.

That Cuban boomerang salesman I mentioned earlier…we in the academy are much like him, and he is much like us. We are like him when we pontificate that quantitative assessment data is the only way to evaluate academic programs, or when we alternatively argue that quantitative assessment and testing data is solely responsible for the ruin of education. We are the boomerang salesman when we argue for the superiority of either fully online or fully face-to-face education. We are him when we argue that education needs to be run entirely like a business, or alternatively when we reject that business models have any value whatsoever in academia. The author illustrates that we are much like the salesman, but does not describe how he is “he much like us?”

When we embrace either polarity of these false dichotomies, we are the Cuban boomerang salesman. We are those children from the urban projects making fun of our immigrant friends’ cheap sneakers. We are those FFA boys clinging to a false hegemony on the eve of unimaginable social pluralism. We are the Cubans on either side of the Straits of Florida, arguing that Fidel is either the champion of salvation, or alternatively that he is the devil incarnate as a Latin American oligarch.

This chapter explores how the holistic intersection of advances in data management and technology, when combined with a heightened focus on accountability, promise to uncover connections in the educational enterprise; connections that have in the past been ignored intentionally and/or unintentionally. Stakeholders outside the university are becoming very interested in these connections as advances in data-driven decision-making are diffused throughout our society. Ironically, whereas we in the academy have historically argued most loudly for increased transparency throughout societies’ institutions, our mystical academic enterprise competes with military intelligence for being one of the last strongholds against transparency in public institutions in the USA.

In addition to stating explicitly the meaning of this chapter, it is equally important to explicitly state what it is not. I do not argue in this chapter that sophisticated data analytics can or should replace critical human thought. Decision-making in education is a complex process involving economic, political, social, curricular and other factors. I would urge the reader to embrace the possibilities for complexity that statistics and mathematics offer us. Peter Appelbaum best expressed this when he wrote:

Describing mathematical intelligence as having to do with thinking logically, working with numbers and acting scientifically makes it difficult to appreciate the aesthetics of mathematics, the irrationality of much of mathematics, the personal relationship that many people experience with mathematical ideas, and, in general, the humanistic qualities of mathematics as a human endeavor. (2004, p. 72).

By latching on to Appelbaum’s eloquence, I argue the same for statistical social sciences research.
But I do not argue for the superiority or importance of one tool over another. Therefore, I do not argue that data-driven decision-making using quantitative data solves all of our problems in education. What I do argue, however, is that we need to embrace in the academy (and in K12 public education) evolutions in data utilization that more fundamentally reveal how our seemingly disparate efforts are connected. Data, I argue, will bind us together more closely whether we like it or not. And they will bind us during what many of us may fear to be the most marked upheaval of academia within our lifetime. We have no choice as to whether this upheaval will play itself out. That is inevitable. We do have a choice, however, for how we negotiate these changes in the academy, and how our work becomes bound with one another’s.

The significance of this challenge is clearly and concisely stated by the late Peter Drucker, who almost 20 years ago, issued this warning regarding the emerging Knowledge Society:

“Indeed, no other institution faces challenges as radical as those that will transform the school. The greatest change, and the one we are least prepared for, is that the school will have to commit itself to results. The school will finally become accountable (1993, p. 209).”

While we explore the complexity of defining, measuring, and using data-results, we need to avoid the jingoistic discussions related to data, assessment, and accountability that often spark visceral responses among academics and other educators. Just ask the question, “What role do you think testing has in education?” and you’ll see what I mean. Like NHL hockey games, these discussions often end as undignified brawls. And as we are busy throwing punches at one another, we fail to see that paradoxically, the changing nature of data may actually serve to bind us by revealing new connections in our seemingly disparate work throughout sectors of education. My hope therefore, is that this chapter will help us transition from an energizing fistfight to a calmer, albeit less exciting exploration of how data will impact our work as educators.

Three main sections in this chapter explore the binding nature of data and how it reveals elements of wholeness in our work as educators. The first section addresses how the increasing availability of data, both quantitative and qualitative, is bringing together the disparate work of individuals and entities within the postsecondary enterprise, at times intentionally, at times unintentionally. Regardless of intent, the result is definite and unavoidable. The second section then briefly describes how these data-related advances in social sciences lessen the hegemonic divide between quantitative and qualitative research. The narrowing of this divide has serious implications for our graduate programs designed to prepare future researchers. Finally, the third section explores how the changing nature of data is impacting leadership throughout Education by calling for increased reliance on data-driven decision making, as opposed to authority-driven decision-making. I think the three sections need to be better delineated in the text. It is hard to differential between the three sections.
INCREASING AVAILABILITY OF DATA

Data are more readily available than ever before. Several technological advances have impacted the availability of data. Initially, these advances provided us apparent benefits in terms of data storage and manipulation. Along with these benefits, however, these advances are creating challenges that provoke our sensibilities related to the privacy of our work as individuals and as organizations. One effective framework for examining these developments in data availability is the notion of the *adjacent possible* (Johnson, 2010). In his work, Johnson examines historically the breakthroughs in technology. He argues that innovation does not occur in giant leaps forward, yet most often occurs as a series of regular and methodical steps defined by realistic possibilities for moving forward. He refers to these realistic transitions as the *adjacent possible*.

The concentric circles in the graphic below illustrate the sequential *adjacent possible* developments in data technology that are increasingly making our work in the academy more transparent. And it’s not just that our transparency as individual entities is being revealed. These changes in the nature of data are also revealing how our work throughout the educational continuum is connected. We have only begun to identify the great number of these connections that can be explored, when we work with data repositories that are federated across departments, colleges, institutions, and even countries. As Johnson reminds us, the secret to organizational inspiration is to build information networks that allow hunches to persist and disperse and recombine (p. 127). Although they do not represent all possible information networks, federated repositories are a critical component for engendering innovation in the academy.

**Diagram:**
- Data are digitized
- Internet makes data capture convenient.
- Individual entities warehouse and analyze their data.
- Hardware/software compatibility increases.
- Compatibility calls to question, “Why not federate?”
No longer can postsecondary educators pretend their work is disparate from K12 educators’, and vice-versa. No longer can we claim that it is impossible to isolate the impact of a given faculty member on student achievement. No longer can we claim that it’s difficult to put a price on the production cost (this is a concept that I am not familiar with, What is met by Production cost?) per peer reviewed journal article in a given academic college. Increasingly, it is these very connections that create awkward conversations regarding the efficacy and efficiency of education. Before exploring the evaluative possibilities that result from federated databases, it is important to briefly explore the history of adjacent possibilities that have brought us to the present. Each of these developments is discussed in turn below.

Data Digitization

Younger readers may be unaware that it was not that long ago that most social sciences data was collected in paper format. Even though I utilize computers extensively in my work as a statistician and researcher, my office still contains a plethora of notebooks in which I handwrite my ideas and observations, using the principles of note taking that I learned as an undergraduate chemistry major. One place to begin examining the adjacent possibilities that have led to our current modes of data utilization is the moment when digitization of data became commonplace, as represented by the bulls-eye in the graphic above.

I remember in the very early 1980s, the availability of affordable personal computers allowed individual researchers to digitize data easily on their own computer as opposed to having to conquer the political and monetary hurdles necessary to be granted space on a mainframe server. We easily forget that many of our social sciences research projects facilitated so easily today by our PCs and with Internet access would have consumed a much greater amount of work just 30 years ago. When conducting my own dissertation research about 16 years ago, the computing power of my IBM 386 computer at work required me to run my monte-carlo simulations in batches over several weeks. Having a daytime job, I would execute a run at quitting time, and then leave the computer running for several hours while it analyzed the data. I would arrive a little earlier each morning to save the output generated overnight, a process I repeated daily over several weeks. Today, I could probably do it all in one very brief session on my laptop.

When I started my Master’s program in 1986, the university’s main computer lab had one PC in the front left corner that had connected to it an external diskette drive for the new 3.5 inch diskettes encased in stiff plastic. All the remaining computers relied solely on the larger 5.25-inch “floppy” disks. At the time, these diskettes that each stored 2 MB of data seemed like a remarkable innovation in storage capacity. By contrast, I now have stored in my computer’s hard drive over 11,000 photos taken on a digital camera I purchased 8 years ago. Each of these photos would require about two of the 3.5-inch diskettes I used during my Master’s studies. Advances in personal computers and respective advances in data storage capacity, therefore, have
revolutionsed our ability as consumers to store data. Likewise, these advances have also revolutionized the nature of researchers’ ability to store and analyze research data in digital fashion.

Whereas the personal computer provided affordable access to hardware, concurrent software developments make it possible for researchers to access software that also changes fundamentally our approaches to data. There was a time when the codification of quantitative data in social sciences research required knowledge of matrix algebra, which invariably discouraged many from pursuing training in quantitative skills. Along came a software development designed primarily for economists and business people that forever changed the masses’ perceptions of the organization of data.

Lotus 1–2-3 was one of the first electronic spreadsheets that became available as affordable software for individual PC users. What software packages like Lotus 1–2-3 and Microsoft Excel did for spreadsheet data is that they shifted the public perception of electronic data storage from something so seemingly complex to something quite understandable for anyone with a basic knowledge of personal computing. The applicability of spreadsheet software spread like wildfire to contexts outside accounting and business. Suddenly, social scientists began using this software to collect, manage and store their research data.

Influence of the Internet

Once we were able to digitize our data in an affordable fashion on an affordable personal computer, the next adjacent possibility allowed us to share and access data more easily with one another, thus revolutionizing how we inform research, evaluation, and strategic planning in postsecondary education. The increasing sophistication of the Internet may be considered the next adjacent possibility that influenced our ability to collect data, and set us further down the path towards data-unification (i.e., federation). For example, survey researchers like myself now utilize web-based sites like www.surveymonkey.com to collect data in a more automated fashion. The ubiquitous utilization of electronic mail addresses (i.e. email) as compared to physical US Postal Service (USPS) addresses has forever changed our ability to reach out to potential respondents in our research. Utilization of Internet-based survey administration services also helps ensure that data are not compromised with errors from manual coding.

The Internet also has changed how we conduct reviews of literature, with electronic sources available online. The submission of manuscripts or grant proposals, once a paper-driven process, is now conducted more conveniently online. In fact, it would take days for many of us to count the ways in which our work previously conducted in person, over the phone, or via postal service is now seamlessly conducted via the Internet.

Given the manner that we now digitize data so easily coupled with how the Internet simplifies how we access and share data with one another, our paradigm for
data collection has flip-flopped over on its head. Whereas in the past we spent the majority of our work as survey researchers collecting data using manual means, the current nature of our work is that we spend the majority of our time dealing with the deluge of data, and making difficult choices about which data are important. Coincidentally, our respondents who respond to our surveys face the same challenge in deciding to which of numerous survey invitations they will respond.

Warehousing Data

The digitization of data changed the way that we collect information. In particular, it changed our expectations for what constitutes a reasonable amount of data to collect in order to inform our research, evaluation, and decision-making. As Senge reminds us, we now have the capacity to create more information than anyone can absorb, to foster greater interdependency than anyone can manage, and to accelerate change far faster than anyone’s ability to keep pace (2006, p. 69). The subsequent adjacent possible, the Internet, then made it very easy for us to share that data with one another. Academicians within the same University could share data more easily, as could academicians living 10,000 miles apart from one another. This second development in the trend of adjacent possibilities has revolutionized our daily work lives as we increasingly use the Internet to process information. The next subsequent adjacent possibility is that given our capacity for the storage of large amounts of data, and given our increased connectivity via the Internet, individuals and the respective organizations to which they belong within the Academy are now warehousing large amounts of data.

In academia, we now have more data than we know what to do with. And it’s important to recognize that this trend is not limited to quantitative data. The same trend is occurring for qualitative data as well. Social networking sites like Facebook.com, for example, produce a wealth of narrative data that can be mined retrospectively by social scientists. Scraping is a technique by which computer enthusiasts can comb the Internet for narrative data, and it has both esoteric and utilitarian value.

The warehousing of data, however, presents as many challenges as it does opportunities. Academicians and researchers are warehousing more data than they will ever be able to analyze. We are likely to see over time that these repositories will swell geometrically, compounding the problem of how to begin to make sense of these gargantuan repositories. As Peter Drucker warned us about the knowledge age, “We will not be limited by the information we have. We will be limited by our ability to process that information (Edershiem, 2007, p. 13).”

COMPATIBILITY

The next adjacent possibility that further revolutionized our utilization of data has to do with compatibility of data systems. On my first day on the job as a medical educator, one of the most urgent assignments I was given was to try to figure out the software code the college had been using for many years to process student
grades. A computer specialist employed by my new employer had written this particular software. Since there weren’t many commercial programs available then for managing student grades, institutions often developed internal software like the one I was asked to figure out, given this computer specialist’s impending retirement.

At that time, computer software was not as compatible as it is today, something we often take for granted now. If I now produce at work data that are either quantitative or qualitative in nature, it is likely that almost any other user throughout the world, using conventional commercial software, will be able to easily import my data into his or her system. We need not worry about losing our entire data schema because of a computer programmer’s impending retirement. What this adjacent possibility has helped achieve is a common expectation that researchers, instructors and administrators in academia can easily share with one another their digital resources.

**CALLING TO QUESTION OUR RELUCTANCE TO FEDERATE**

Up to this point, this chapter has reviewed a sequential set of adjacent possibilities that have led to the current state of data utilization in academia. We now have the means to very inexpensively store large amounts of data. Via the Internet, we now have the means for collecting and sharing these data among stakeholders in the academic community. Many of these stakeholders in the academic community have now amassed their own data warehouses or repositories, thus contributing to a collective set of data stored in disparate fashion over millions of PCs worldwide, an amount of data that is incomprehensible.

What remains in the field of education is for us to begin to federate these data repositories. Although this type of data federation is an adjacent possibility already being practiced by stockbrokers, supermarkets, retail chains, fast food establishments, and even healthcare systems, it has yet to gain a similar level of traction within academia. Yet the reader needs to be aware that regardless of our intent, data federation in academia will occur whether we like it or not.

What exactly does the word federation mean? In a traditional university, data sources are stored in disparate silos throughout the institution. A foundational principle of database management is that datasets have a particular field in common that allows us to link them with one another. Therefore, a student identification number serves to connect student achievement data with student demographic data with student admissions data. In a federated data set, an institutional researcher would be able to access all data for a particular student with relative ease in a matter of minutes.

This type of data federation does not pose a serious technological challenge. What makes the Federation of data within academia so difficult is that the organizational process for accessing multiple data sources and combining them into a single-silo (Díaz, 2011) repository becomes a political and bureaucratic nightmare. There is a similar trend occurring in public K-12 education that informs our attempt at federation in the University. Ideally, public state officials can assign a given student an identifier
when she begins prekindergarten. By associating all subsequent data collected for that particular student throughout her K-12 education, and by maintaining that data in a single silo repository, educators could retrospectively explore the data much more effectively for the purposes of educational research and quality assurance. In fact, this scenario makes it much more possible to begin to parse out statistically the impact of a given teacher on a particular student’s overall achievement throughout her public school career.

Now take this idea one step further. Imagine that the student continues on to receive postsecondary education in the same state at a public institution. If we continued to federate data such that a single student’s academic achievement and demographic data could be contained in a single silo repository from prekindergarten to postsecondary, the possibilities for informing our work could be endless. It is this very possibility that likely fuels much of the resistance against any attempts at data federation.

We should expect continued resistance to our attempts to federate and analyze these datasets. Bringing data together is every bit as threatening as bringing together family members for an addiction-intervention. Wholeness, in certain contexts, is very threatening.

As an example, sometime ago I was working with a client who was part of a statewide system of mental health delivery. The client was working in conjunction with researchers at another university to investigate a particular approach to mental health services. As is the case in many of the 50 states, my client had access to a statewide repository of data that catalogued every service provision that occurred in public mental health agencies within the state. In other words, this data system contained tens of millions of data records for each calendar year. Originally I was asked to assist in selecting a small sample for the study. I remember clearly the deadpan silence at the other end of the conference call meeting when I suggested that the study utilize data mining approaches. I suggested that as opposed to basing the study on a small set of ~600 randomly selected participants, the client instead give me access to the entire state-wide database and allow me to do the same analysis using the complete population. After an awkward 10 seconds of silence, someone at the other end of the conference call finally spoke up and said, “Why don’t we just stick to the sampling method?”

This story reveals a foundational principle with which my statistician colleagues and I struggle: Although most individuals know relatively little about statistical methods as they relate to large datasets, almost all recognize the implications for making such a large dataset available for statistical analysis. Most non-statisticians understand fully that the stakes are huge when these types of big data approaches are utilized. For example, Drucker warns that when a company focuses its data-processing capacity on producing information, often it becomes clear the number of management levels and managers can be cut since whole layers of management levels neither make decisions nor lead (2006, p. 128).

Consider the educational industrial complex in the US. Imagine what the respective budgets are for early childhood education, middle school education,
secondary education and postsecondary education. Most individuals, even those who know little about statistical methods, understand that if any given state’s K-12 data were federated into a single-silo repository, we might find trends that present awkward, if not difficult challenges. Even individuals who are great advocates for American Public Higher Education, like Clark Kerr, concede that effective use of resources in public research universities, overall, can be improved at a significant level (2001, p. 190).

TECHNOLOGY’S IMPACT ON OUR METHODOLOGICAL APPROACHES

If we can’t seem to come together on the accountability issues related to federated data repositories, we need to at least work together to address the changing nature of data and its impact upon methodological principles upon which we base our work. Before discussing methodology further, let me openly admit the limitations of statistical methods. My thesis in this chapter is not for statistical data’s superiority. As Margaret Wheatley reminds us, the management of knowledge, which is inherently invisible, is incapable of being quantified, and born in relationships, not statistics (Wheatley, 2005, p. 147). The data gleaned from federated databases reveals transparencies and relationships. It does not, however, stand in place of critical and complex thought. Yet the same can be posited for any methodological approach. No single research tool has superiority over others. And as luck would have it, federated data repositories are revealing valuable links between quantitative and qualitative approaches.

Data mining is a new type of exploratory and predictive analytics whose purpose is to delineate systemic relations between variables when there are not (or incomplete) a-priori expectations as to the nature of those relations (Luan, 2002, p. 17). Therefore, data mining does not employ traditional null hypothesis testing (NHT), a trend that makes many traditional positivists feel rather uncomfortable. This problem is further compounded when one considers that large federated repositories of data call to question the need for statistical sampling. Why collect only part of the population’s data if you have the entire set at your disposal? This presents new unanswered challenges for researchers.

Even when one does not have access to the entire population, we are finding that big data sets provide such large samples that many, if not most, of the questions we can generate yield statistically significant findings at the $\alpha=0.05$ rejection level. The possibilities for posing a seemingly unlimited number of quantitative questions raises concerns about inflated Type I error rates (the probability of rejecting a null hypothesis when that null hypothesis is, in fact, true).

Answering these questions is well outside the scope of this chapter. Yet to address them fully, we must come together as quantitative and qualitative researchers (as well as those not belonging to these polarities) so we can learn from one another’s epistemological assumptions. For example, when I engage in data mining, I often reach out to a close friend and colleague who is a gifted critical theorist, and ask him...
how I can deal with research problems that need to remain flexible throughout the process of investigation.

Challenges will exist for qualitative researchers as well. Not all the data being warehoused is necessarily quantitative in nature, and these federated repositories will challenge investigators to adapt their qualitative methods to the context of large datasets. Again, exactly how these issues will be resolved is unclear at this point. What is clear is that the changing nature of data, especially within academia, may cause many of us who have ignored each other in the past to come together and work with one another. In other words, the data will bind us.

A recent example of this groundbreaking type of work is taking place at the University of North Carolina at Chapel Hill. There researchers are exploring the phenomenon of altmetrics – short for alternative metrics – to measure Web-driven scholarly interactions (Howard, 2012). This approach offers an alternative to citation analysis by examining how often one’s research is blogged about, or tweeted. This innovative approach to faculty evaluation points to the Internet’s function as a massive warehouse of narrative data that can be explored through thoughtful qualitative research. Yet to do so, qualitative researchers will need to come together with colleagues from a variety of disciplines (e.g., computer scientists) in order to create more automated mechanisms for poring through the data.

**DATA’S IMPACT ON LEADERSHIP**

Who would have ever imagined that evolutions in how we deal with data would create a revolution within the academy? And who would have imagined that the more progressive uses of data-driven decision-making would occur outside the academy? If McDonald’s, Netflix.com, and Amazon.com can use federated data to inform their decision-making, what excuses do we have in the academy for not doing so? It’s becoming quite apparent to everyone but ourselves that we might be trying to hide something.

In the academy, we pride ourselves on our ability to uncover truths that are conventionally unpopular outside the Ivory Tower. I wonder if, ironically, the reason we are so resistant to creating federated repositories of data that we can mine is our collective fear of what will be revealed. It behooves us not to see ourselves as being so distinct from all the other types of organizations outside our institutions. As Thomas Friedman stated, in a flat world the best companies stay healthy by getting regular chest x-rays and then selling the results to their clients (2007, p. 461). Friedman goes on to explain this process as one in which,

> every department, every function, is broken out and put in a box and identified as to whether it is a cost for the company or a source of income, or a little of both, and whether it is a unique core competency of the company or some vanilla function that anyone else can do - possibly cheaper and better (p. 462).
Although this quip may seem irrelevant to our sensibilities as academics, consider how much valuable intellectual capital we waste in the academy through service-related committee obligations.

The historian Niall Ferguson (2011) reminds us that the initial dominance of Western cultures over the East was due to the widely differing degrees to which new and profound knowledge was systematically pursued and applied (p. 57). He further posits that it’s this very trend that is resulting in a shift of global power. Might then those of us reluctant to explore data from our institutions be succumbing to imperialism from afar? Silly as that may sound, it is exactly what happens when the academy’s work is usurped by outside entities. It may be that the needs of today’s knowledge worker cannot be adequately addressed by the university as we know it today and that new institutions will emerge to fill the widening vacuum developing between traditional higher education and the demands of today’s knowledge-intensive workplace (LaRue, 2002, p. 280).

One area where leadership is needed is in our ability to better meet students at their particular uniqueness. With respect to the technology for preference matching, such as that used by Amazon.com or Netflix, Lessig (2001) argues that this technology actually makes it easier for individuals to enter markets, such as having their music or books published (p. 133). He explains that by increasing the demand for a diverse selection of content, and by enabling the cheaper identification of that demand, the Net widens the range of potential contributors (p. 134). A corollary to this prediction may be that by analyzing more fully the preference matching for our students, both with respect to their selection of colleges and their learning activities, we may increase the diversity of student demographics that are succeeding in postsecondary education. In other words, we could be a heck of a lot more pluralistic in the academy if we were to explore that which federated data sets may reveal about our subtle biases.

Federated data systems may also contribute to what Ernest Boyer referred to as scholarship of integration. By integration, he stated, we mean making connections across the disciplines, placing the specialties in larger context, illuminating data in a revealing way, often educating nonspecialists, too (1990, p. 18). I am heartened by Boyer’s emphasis on integration, which implies our coming together as academicians from seemingly disparate perspectives.

It is apparent that even if today’s academic leaders aren’t fully data-driven, we need to engender a new generation of leaders who use data on regular basis to inform not only their research, but also their day-to-day decision-making. Again, this utilization of data does not preclude nor does it replace critical thought. What it does is encourage leaders and practitioners to not ignore the data. Furthermore, it encourages these leaders to explore more fully the connections between our seemingly disparate work.

It may sound simple, but this new approach to leadership requires foundational changes in how we prepare academicians. Those of us who may all too soon become obsolete in our approaches need to be sensitive to our progeny, since these graduate
students will interact with data someday in ways that are markedly different than that to which we have become accustomed. Consider your current experience in a digital world, and compare and contrast it with a professor whose career began in the 1940s. Now take that difference, and project it forward, multiplying the level of distinction by a factor of 1,000 (I apologize for the unabashedly quantitative metaphor). You now have a sense of what your graduate students may experience.

CONCLUSIONS

Much like life itself, a career in Higher Education is going to become, very soon, all too soon, a very difficult pursuit. It doesn’t matter if you teach face-to-face or online. It doesn’t matter if you’re a Professor of Medicine or Sociology (or both). It doesn’t matter if you’re tenure track, adjunct, small school, land grant, undergrand, graduate, Ivy League, regional, community college, etc. Regardless of which divisive category to which you ascribe yourself, you and your fellow colleagues are entering an era in which the focus on accountability is going to increase remarkably.

I urge you not to rely on divisiveness to get you through these tough times. Instead, embrace the hidden wholeness of what you do, who you are, what your institution is, and you’re more likely to come out okay on the other side. Embrace paradox. As Collins and his colleagues discovered in their research, the leaders of companies who endured successfully through difficult times are comfortable with paradox, having the ability to embrace two opposed ideas at the same time (2011, p. 190). If as an academic you rejected this former statement since the finding involves leaders of companies rather than leaders of universities, it behooves you to reread the sentence.

In my living room the other day, a friend stopped by for conversation. He’s a former K12 teacher, and is currently pursuing a doctorate in education. As usual, our conversations turned to my assertion for the need for accountability, and his towards the negative impact of testing on education. As my friend defended the position of K12 and postsecondary educators, he reminded me that we are making an egregious miscalculation in the academy.

Up until now in this chapter, I have argued for the coming together of academicians from disparate backgrounds. I now urge you to expand the boundaries and explore your connections with the outside world. We educators need to consider carefully the broader context of our work.

As I write these few paragraphs on the eve of Christmas here in West Virginia, my tendency to complain about my work conditions is tempered by the realities faced by others in my community. My family and I live in Preston County, one of the poorest in West Virginia, which in turn is one of the poorest states in the country. Today we will drive down the road to the Family Dollar in Bruceton Mills to purchase canned groceries for the local food bank, located just around the corner from the town’s hair salon. There we are likely to see about 30–50 people lined up to receive food so they may offer their families a decent meal at Christmas. It’s important to imagine what
they must be thinking as they see me drive up in a car that is relatively new, and having enough money to contribute food to others.

At a faculty meeting just the other week, I presented to my colleagues a database design used to help evaluate our academic programs. One of the hypothetical questions I posed to my fellow faculty members, to illustrate the utility of the database, was, “How much do WV taxpayers pay, on average, for each peer-reviewed manuscript produced in our college?” One colleague immediately quipped, “that kind of question is totally irrelevant.” Is it?

What if I were to invite to our faculty meeting one of the unemployed and/or homeless persons standing in line at the Preston County Food Bank? Would the question still be irrelevant? What if we were to invite to our faculty meeting a gainfully employed social services worker from McDowell County, WV who is struggling with severe budget cuts? Would the question about the cost of research publications still be irrelevant? What if we were to invite to our faculty meeting a K12 education administrator from a nearby county who is struggling with decreased tax revenues given the real estate bubble having burst? Would that person’s presence in our faculty meeting change the relevance of my accountability-laden question? How would our indignation at having a cost, albeit imperfect associated with our publications compare with the indignation of standing in the cold on the Main Street of Bruceton Mills so one can feed their families during the holidays?

All across the US, families that once lived in middle class homes are schlepping their kids from one form of temporary housing to another as they struggle with unemployment and homelessness. Those lucky enough to still have their homes are often strapped with mortgages worth much more than their home. And everywhere, individuals struggle with the uncertainty of shifting economies.

So let’s revisit our context. While the United States is experiencing some tough moments economically, those of us in the academy are in the meantime viewing ourselves as uniquely disconnected from the worldwide trend in belt-tightening. All over the world, private industry and public service agencies are embracing the utility of quantitative and qualitative data as they struggle to demonstrate increased productivity to their stakeholders. At the same time, in most public institutions of higher education, administrators struggle to implement even the most rudimentary forms of accountability. If anything will eventually kill us, it is our elitist propensity as academicians to see ourselves as being disconnected from all that is occurring around us throughout the world. For some of us, unfortunately, that elitism will be cured instantaneously as academic departments and universities are shut down entirely.

So what’s the solution? I’m not sure. Yet I do know that we need to speak to and listen to one another a lot more. Quantitative researchers need to listen carefully to the criticisms of qualitative researchers when they ask us to embrace the ethical, the moral, and the subjective aspects of our research. Qualitative researchers need to listen as well when quantitative researchers point to numerically based trends in the data that are difficult to ignore. We need to teach one another, and learn from
one another. And we need to create a space where students who fall somewhere in the middle of our arguments need not make a dichotomous choice, and that they can visit our respective offices on the same day, the same hallway, without the fear or shame of having betrayed their allegiance to a particular dogma.

We are often guilty of forgetting to pay attention to the substance of our work as we obsess about the structures that support our work. We must ask ourselves why Michael Lewis’ book *Moneyball* (2004), now a motion picture starring Brad Pitt of all people, has captured the collective hearts of Americans. After all, it’s nothing more than a book on data-driven decision-making. Much like educators, baseball enthusiasts can argue that it’s impossible to quantify the experience of baseball, and that there are beautiful elements to the game that no statistic can capture. Regardless, baseball fans worldwide can still get excited about the data associated with the game. So why can’t we in education, after acknowledging the same limitations for our data, get excited about it nonetheless? In the end, the data analyses for baseball that we so collectively adore, and the data analyses for education that we so collectively abhor, are one and the same. Much like the boomerang salesman I met at Varadero, we go overboard trying to distinguish ourselves from one another, when in reality, we aren’t all that different. The data will help to bind us. What we must remember is that our data systems are neither perfect nor are they omnipotent. As Parker Palmer reminds us, wholeness is not about perfection (2004, p. 5). And we must remember that although data may seem to change everything, they are not everything. There is so much else out there to be explored. Yet when we refuse irrationally to explore our data in education, we fail to find so much of what is out there for us to discover.

REFERENCES


**AFFILIATION**

Sebastian R. Diaz is the Associate Vice President for Marketing Analytics at American Public University System.
2. RE-IMAGINING HIGHER EDUCATION FUNDING

“Not until the problems of the poor kick down your door …” Tanya Stephens
(Gangster Rapper – Jamaica, West Indies)

INTRODUCTION

The primary purpose of this essay is to discuss strategies that could be used to revolve resolve the funding crisis facing higher education and which threatens its long-term sustainability. This objective is facilitated by first defining the nature of the funding crisis and then identifying major factors that have led to the present funding dilemma. Given the complexity of the subject of higher education finance, a few assumptions are necessary to keep the discussion manageable. First, while most education scholars, leaders and policymakers will agree that the current system of funding is unsustainable, there is likely to be some debate about the precise nature of the problems. For instance, whereas more conservative policymakers have tended to characterize the higher education funding problem as one of inefficiency, extravagance and poor accountability by institutions, there more liberal counterparts have focused on inadequacy of available funds for targeted goals, out of control student debt and issues related to equitable access. The discussion in this essay assumes that all the competing conceptions of the problem are real and represent different perspectives of the underlying issues. Hence they are all embraced.

Second, while there is on-going debate about the relative proportions of private and social benefits that accrue from higher education, the discussion in this paper assumes the general existence of both types of benefits, in material amounts.¹

Third, although there is considerable consensus that factors such as historical, economic and sociopolitical patterns (e.g., state leadership and partisan political activity, and the relative strengths of various interest groups including players in the higher education sector), influence higher education financing, and vary across states and over, the following discussion is presented as though the US higher education funding environment is uniform across states. This is based on the assumption that there are some underlying similarities in these factors across states.

Fourth, this chapter focuses on the teaching element of higher education, which is often conceptualized as degree production, or workforce development that promotes the economic wellbeing of individuals and the wider society. The decision to focus on the teaching component of higher education is guided by the recent tendency

¹ D.M. Callejo Perez and J. Ode (Eds.), The Stewardship of Higher Education: Re-imagining the Role of Education and Wellness on Community Impact, 35–58. © 2013 Sense Publishers. All rights reserved.
for government and the public to increasingly view higher education institutions as places of instruction (Johnstone and Marcucci, 2007). It is also consistent with the popular perception that the teaching element of higher education is the one most threatened by the current funding crisis partly due to its larger size, and the deleterious effects of prior austerity regime of the research and outreach functions of many institutions.

Any attempt to re-imagine the funding of higher education must begin with a clear conceptualization of the purpose of higher education. Several authors, including Barr (1993), Mellow (2008), and Wellman (2008) have asserted that two of the primary objectives of higher education policy in the US are (1) maintaining or improving the quality of higher education and its contribution to broad aims such as economic development, output growth and the international competitiveness of the country, and (2) increasing access to, and opportunities for, higher education success to all that are willing and able to successfully pursue higher education. In turn, these primary goals suggest the following corollary objectives: (a) improving the age participation rate of US citizens in higher education; (b) improving the performance of those that participate; and (c) promoting more broad-based participation in, and success at higher education by sectors of the US population that have traditionally been either underrepresented in the system, or that have consistently underperformed in higher education (i.e., lower-income groups, minorities – particularly blacks and Latinos, new immigrants, first generation college students). This is very important given the growing representation of these groups in the overall population.

In this environment it is not enough that the most able students, regardless of their family background, can be assured of sufficient financial assistance to attend even the most expensive private colleges or universities, albeit with extensive loans or part-time employment (Johnstone and Marcucci, 2007). The number of students in this category is inadequate to address the demand for post-secondary level educated graduates by US employers striving for international competitiveness or the need for a “modern” middle-class society.

As one seeks to re-imagine the funding of higher education it is important that one recognizes that the perceived causes of the current funding crisis facing higher education, along with differing world views of decision makers and their constituencies which are partly shaped by politics and ideology, may (tend to) drive the suggested solutions deemed appropriate to its resolution (Wellman, 2008). Thus is it critical to get at the root causes of the situation. This thesis contrasts sharply with a tendency highlighted by Wellman (2008) for policy makers and higher education players to take the definition/nature of the higher education funding problem as given, and to focus mainly on relieving the dependence of higher education on government revenue by reducing costs and or finding alternative revenue sources.

There are at least two approaches to examining the root causes. First, if we assume that the state of higher education funding that existed before the present crisis was at least livable, then we could reasonably strive to implement strategies that would get us back to that position. Second, to the extent that we view the situation that
prevailed before the present funding crisis as unsatisfactory and are desirous of improving it, we also need to pay attention to the factors that drive higher education success at the various levels – governments, institutions, and individuals. Though not undisputed, (1) at the level of the government what is necessary is to create an environment that is consistent with the achievement of national objectives for higher education. It is also appropriate for governments to lead in the formulation of such objectives, and once agreed, to monitor progress toward their realization; (2) at the institutional level the focus should be on the factors driving success in higher education, namely (i) the quality of faculty, (ii) the basic infrastructure and a creative environment, and (iii) the quality of students (in terms of qualifications, motivation and ability to devote sufficient time. At the level of the individual, the focus should be on making informed decisions that are consistent with one’s aspirations, deploying adequate effort and other resources to facilitate the realization of those aspirations and accepting the consequences of one’s actions.

SHORT-TERM VIEW OF THE GENESIS OF HIGHER EDUCATION FUNDING CRISIS

The interaction of several factors has been suggested as the proximate cause of the current funding crisis in US higher education. One of the first factors cited is the fact that higher education has never been in greater demand in the US, both from individual students and their families, for the occupational and social status it is presumed to convey, and from governments, for the public benefits it is presumed to bring to the social, cultural, and economic well being of countries. This increases the funding needs of higher education institutions at the same time that there are competing demands for federal and state funding by items such as unfunded pension obligations, health care, corrections, primary and secondary education, social welfare, national security and public infrastructure.

Another factor cited is the high levels of federal and state budget deficits and debt exemplified by the fact that from fiscal year (FY) 2008 through the initial forecasts for 2011, states faced a cumulative budget gap exceeding $400 billion (Pattison and Eckl, 2010), and the national US debt stood at more than $15 trillion in November 2011. This has been attributed to among other things, a commitment by members of the Republican Party and a growing segment of the society at large not to raise taxes under any circumstances, including when faced with the need to fund prolonged wars in Iraq and Afghanistan. This situation was compounded by the U.S. and global financial crisis related to the bubble in real estate markets and troubled collateralized debt securities which caused individual and corporations to lose vast sums of wealth and reduced federal and state tax revenues, reducing both individual ability to pay for higher education and the government’s ability to subsidize it.

Proponents of this “competing demands” thesis have asserted that most of the programs that compete with higher education for public revenues deserve greater priority for at least two reasons. First, they suggest that these programs have fewer feasible alternative funding sources than higher education, which may respond to
government funding cuts by increasing tuition fees, diversifying the student base, and or pursuing research and training contracts (Pattison and Eckl, 2010). Second, it is asserted that the beneficiaries of higher education tend to be less needy that those of the competing programs making it more difficult for those beneficiaries to bear a greater share of funding responsibilities. These arguments seem to be supported by a historical tendency for higher education to be singled out for earlier and larger budget cuts than other state services during bad economic times (Wellman, 2008; Doyle and Delaney, 2009).

To the extent that one focuses on the competing demands for dwindling government revenues as the proximate cause of the higher education funding crisis, one viable solution seems to be to ride out the recession and or lobby government to implement policies that stimulate employment and entrepreneurial opportunities and economic growth. This strategy is a key component of any long-term solution to sustainable higher education funding. It will ensure that graduates are able to find better paying jobs and can repay loans, demand houses and consumer durables and enhance the tax base even without increases in marginal tax rates. It will also enhance the international competitiveness of the U.S. as a destination for capital by boosting the purchasing power of the society.

However, an exclusive focus on this strategy is potentially problematic for at least two reasons. First, there is a high probably that any improvements in government revenues associated with future economic booms may not result in higher levels of funding for higher education as has been the tendency historically. This could be related to an extension of the previously described alternative funding sources argument to contend that higher education institutions having found alternative funding sources, such as higher tuition fees and increases in entrepreneurial activities, do not need to receive pre-recession level government funding. Additionally, conservative policymakers may seek to use such windfalls to reduce taxation, which is a preferred conservative strategy to stimulate economic growth.

Second, even if government funding for higher education reverted to pre-recession levels following an economic recovery, this strategy of addressing the funding crisis by focusing on the overall economy, would leave higher education exposed to the recurring boom-bust cycles inherent in the market-driven U.S. economic system. Hence, other strategies are needed to break the boom – bust cycles for higher education funding, i.e., to put systems in place that cushion the effects of economic downturns on the funding of higher education. Insights into such strategies may be gleaned by adopting a more long-term and holistic view of the current higher education financing crisis.

LONGER-TERM VIEW OF THE GENESIS OF HIGHER EDUCATION FUNDING CRISIS

When one adopts a longer-term perspective, the genesis of the US higher education funding crisis seems more fundamental in nature and complex to resolve. Researchers
have suggested several factors that may be related, in differing degrees, to the current financial crisis in higher education. For instance, Johnstone and Marcucci (2007) recently asserted that the financial austerity being faced by US higher education is due in large part to the fact that higher education costs tend to rise at rates considerably in excess of the corresponding rates of increase of available revenues, especially those revenues that are dependent on taxation. This is exemplified by the fact that state funds devoted to higher education rose from $58.1 billion in FY 2000 to $71.6 billion in FY 2010 (Pattison and Corina, 2010), but barely kept pace with inflation (partly due to increasing number of persons seeking higher education). Also, this assertion is supported by Wellman’s (2008) finding that tuition fees at universities have increased roughly 2 to 3% faster than the rate of inflation over the past decade as schools sought to replace dwindling state funding per student.

According to Johnstone and Marcucci (2007) the divergent trajectories of higher education costs and available revenues are a function of two key factors. First, there are the rapidly increasing per-student costs related to high and rising infrastructure and personnel costs, and the labor intensive and productivity resistant nature of higher education activity. The second factor is the increasing tertiary level participation rates fueled by higher demand for post-secondary education with the advent of (i) a relatively new emphasis on life-long learning which is attracting new, older and part-time students into higher education partly due to shorter product life cycles and removal of lifetime employment arrangements; and (ii) what has been termed the “Knowledge-” or “Innovation-economy.” As an increasing share of world production moves into services and the so-called knowledge-based sectors of high-technology, design, finance, management and the like, at least some higher education is becoming more important than in earlier eras, for individuals to be productive members of society and participate meaningfully in communities, and for societies to compete effectively in the global race for influence, talent and money (Mellow, 2008).

A second factor frequently cited as a contributor to the US higher education funding crisis is the declining priority assigned to the funding of higher education relative to other areas of federal and state budgets. The following are four indicators of this trend: (i) the fact that higher education’s share of state’s general funds has fluctuated over the past 20 years peaking at 13.1% in FY 1998 and falling to 10% in FY2010 (Pattison and Eckl, 2010); (ii) recent initiatives undertaken by Republican controlled legislatures in Wisconsin and other states to create an environment more conducive to cuts in education spending, especially salaries and benefits of teachers, and other public workers; (iii) the fact that there is little reluctance to pass on price increases for higher education (also health care and social security) to the most needy in society, while there is great consternation about any talk of raising taxes on the richer class; (iv) the fact that public expenditure on higher education in the US, as a percent of total public expenditure stood at 3.2% in 2008, well below that in several other countries including Mexico (5.5%), Canada (4.5%) and Denmark (4.2%) (OECD, 2011), and (v) the limited attention devoted to the role of higher education
and the priority of its financing needs in discussion about restoring growth to the
US economy and facilitating its continuing leadership role in global economics and
politics. This contrasts sharply with the responses of the US government to the need
for funding the wars in Iraq and Afghanistan, the bailouts of Wall Street and the auto
industry, the Bush administration tax cuts, and the recent health care reforms pushed
through by President Obama and the Democrats. While many would agree that most
of these initiatives are more urgent that the higher education situation; it is far from
decided that they are more critical than a high quality higher education systems for
the long-term political and economic aspirations of the US.

The relatively lower priority assigned to government funding of higher education
has been partly attributed to the increasingly of the view that higher education is a
private good (Heller and Rogers, 2006) as recent increases in the premiums paid to
persons with higher education relative to person without higher education providing
sufficient returns from their higher education expenditure to make government
subsidies less necessary needed or completely unnecessary.15,16

This view has resulted in the implementation of policies that reduce the proportion
of higher education costs borne by federal and state governments (Heller and
Rogers, 2006). Also, it may help explain the lack of coordinated federal and state
policies for funding students and higher education institutions. When this is coupled
with tuition increases at all types of higher education institutions, the result is great
financial burden on students and their families to finance their higher education
needs (St. John, 1994; Weiler, 2000).17 To make matter worse, students and their
families have seen their purchasing power eroded by the economic turmoil since
2008 with the attendant high level of unemployment and the major losses to home
values and investment portfolios/saving.

Another factor contributing to the current funding crisis in higher education is
the change in the type of financial aid that is provided to students. An increasing
proportion of financial aid is being provided in the form of loans rather than grants,18
and as a result of policies such as the curtailment of social security tuition support
and the slow growth in the value of Pell Grants relative to inflation during the past
three decades. Additionally, many of the grants that have historically been awarded
based on the financial need are today being awarded based on academic merit,
without regard to student income or wealth.19 These grants have increasingly gone
to students from middle and upper class backgrounds (Heller and Rogers, 2006).20

These changes have resulted in high and increasing levels of education-related
debt among students and graduates.21 Also, they have the potential to preclude the
continuing participation of lower-income and even lower-middle-income students
and others who have traditionally been underrepresented in the US higher education
system.22 This would waste talent and harm individual and societal economic welfare
by excluding able persons from potentially more productive (and lucrative) activities.
This is exemplified by the fact that many middle class persons now attend lower cost
public institutions and the proportion of low-income students attending four-year
colleges and universities is declining (Weiler, 2000). Also, as noted by Johnstone
and Marcucci (2007) while the most able students, regardless of their family, can be assured of sufficient financial assistance to attend an expensive private college or university, albeit with extensive loans or part-time employment, unfortunately the number of students in this category is not sufficient to address the demand for post-secondary level educated graduates by US employers striving for international competitiveness or the need for a “modern” middle-class society.

The complex range of grants and loans that are available to students from federal, state and campus sources further compounds the difficult higher education funding situation. This creates two major challenges. First, it represents a major administrative burden for participating institutions and agencies. Secondly, it makes it difficult to understand all the programs that are available and to determine which options are best suited to their individual circumstances. As a result, students frequently are not matched with the resources that are best suited to their needs and aspirations.

Finally, it has been suggested that the performance-based funding initiatives implemented by several states to enhance accountability for public funds may have had unintended consequences for weaker higher education institutions. As traditionally conceived, performance-based funding focuses on directing resources to those units that have been successful in the past or that demonstrate excellent promise for the future. While this strategy is attractive to policymakers concerned about accountability and effectiveness, conceived in this manner, it has the potential to rob weaker units of the resources needed to succeed, while providing more resources to better performing units where they are less critical. These initiatives tend to discounts the factors that may have militated against the historical success of underperforming units, such as culture, resource availability and quality of input (e.g., high school students and teachers). Further, they seem flawed in that they do not remedy the underlying performance problems, and are likely to result in more students falling by the wayside if resources are taken away from underperforming institutions. Surely there must be better ways to address the accountability and performance issues targeted by performance-based funding initiatives. This is the focus of the next section.

ALTERNATIVES STRATEGIES FOR RESHAPING HIGHER EDUCATION FUNDING

The preceding analysis and a review of some of the initiatives that have been implemented by US states, other countries and educational institutions faced with financial crises, points to several strategies that may be deployed to alleviate the funding crisis in higher education and facilitate the realization of the long-term goals and objectives of US higher education policy. The following discussion will present these strategies using two different perspectives. The first perspective focuses on what is needed to overcome the divergent trajectories of higher education costs and revenues – i.e., improving efficiency and effectiveness. The second perspective highlights the stakeholder(s) that are best positioned to articulate and implement
the specific strategies needed to address the contributors to the higher education funding crisis.

*Improving the Efficiency of Higher Education*

To the extent that we accept Johnstone and Marcucci’s (2007) contention that the root cause of the higher education funding crisis is the divergent trajectories of higher education costs and revenues, it becomes apparent that a key component of any long-term solution must involve restraining the cost of higher education. Much have be written about strategies to improve educational efficiency, a lot of which has rightly focused on cost reduction, in particular, reducing the total compensation cost of higher education institutions which is typically their largest recurrent cost. Other cost-focused strategies that have been implemented in the past include deferring maintenance, dropping low-priority programs, maintaining insufficient or outdated library holdings, computing and Internet connectivity, and reducing support for faculty research. However, as suggested by Johnstone and Marcucci (2007) these strategies may have run their course having been used extensively in the past. If so, any further use may lead to unwanted consequences such as declining teaching effectiveness, limiting opportunities for mentoring, reduction of scholarly output, and higher administrative costs for tasks that were once performed by senior and or full-time faculty.

Conversely, not enough attention has been paid to the quality of one of the other key inputs to the higher education system, i.e., students. According to the ACT (2011), in 2011 only 25% of high school graduates met all four College Readiness Benchmarks (for English, Reading, Mathematics and Science). Further, high school graduates were most (least) college ready for English (Science) with 66% (30%) meeting the benchmark for that subject. Further the overall College Readiness of high school graduates in all four subjects remained relatively stable over the period 2007–2011 ranging between 22% and 25%. Similar stability was observed in the college readiness of high school graduates across all four individual subjects, with no subject experiencing more than a 2% change, positive or negative, between 2007 and 2011 (ACT, 2011). This suggests that between 34% (English) and 70% (Science) of students started their higher education careers in need of remediation or were unable to access higher education due to academic shortcomings. The cost to higher education institutions and society based on this state of affairs are potentially significant.

Also, this raises the issues of whether high school or higher education institutions possess a comparative advantage in term of their ability to get students college ready in an efficient manner. If we conclude that higher education institutions have the comparative advantage, then it raises major questions for our overall educational system. On the other hand, if we conclude otherwise, then it follows that the remediation resources expended at the higher education level are not cost effective. The high number of students needing remediation also means that students are likely to take longer to complete higher education programs which must have negative
consequences for their finances, as it adds to the overall cost of higher education and delays their entry into the full-time work force. If the college readiness of these students could be improved before they graduate high school, then the total cost of higher education would be lower.\textsuperscript{25}

Any attempt to address this issue must begin with a proper diagnosis of its antecedents. However, without prejudging the likely findings of the investigation that is needed to properly diagnose this situation, some general issues and strategies are outlined here based on ongoing discussion in the education literature. To be sure some part of this problem is inherited from the primary education level in the form of students entering high school not having the requisite background knowledge or competences to be successful at that level. Additionally, there is the issue of the low level of articulation between high school graduation requirements and the expectation for higher education success that has received considerable attention in the academic literature (AEEIB 2007). However, since a set of Common Core State Standards (CCSS) for high schools is expected to go into full effect by 2014, this issue will not be addressed here. Other possible factors are teaching related, such as the quality of teachers and teaching, the effectiveness of their teaching methods, and the quality of the infrastructure at their disposal.\textsuperscript{26}

\textit{Improving teacher quality.} Few would question the magnitude of the challenges faced by high school teachers ranging from increasing levels of student indifference (low motivation) and indiscipline, to students’ expectation that they will be told exactly what to do and think, to job insecurity with many states viewing them as discretionary, to low levels of administrative support, and low remuneration packages relative to that earned by similarly qualified persons in industry. These challenges have potentially adverse consequences for the attractiveness of high school teaching as a career, the quality of candidates attracted to the profession, and their commitment to, and retention in, the profession (Jimerson, 2003; Public Agenda, 2007).

Therefore, to attract and retain the best minds to high school teaching careers we need to increase its attractiveness (Weiler, 2000). At a minimum, this may mean that salaries and benefits need to be on par with those available in the other career options available to similarly qualified individuals (Jimerson, 2003). Further, given the challenges experienced by high school teachers relative to those faced in other career options, we may need to offer better compensation packages than those available in competing profession to attract candidates into, and retain them in, the profession. Financial and other resources are needed to implement strategies to alleviate the discipline, infrastructure and other challenges in the high school system; and to conduct systematic teacher induction, orientation and development programs to help them better understand what to expect of students and to provide some preliminary ideas for overcoming discipline, motivational and diversity issues (AEEIB 2007). Those resources will likely only be forthcoming if a higher priority is assigned to the funding of secondary education than currently prevails. If remedial strategies
are not implemented, we run the risk of getting less that the best people interested in the high school teaching profession, having out-of-field teaching assignments, higher turnover, less coordinated curriculum, less experienced teaching staff and fragmented professional development. None of these consequences bode well for improved student learning.

Also, no discussion of teacher quality will be complete without recognition of the need for making high school staffing more flexible, especially among institutions facing the greatest challenges. Strategies are needed to make it easier to incentivize both positively and negative, higher education employees, especially unmotivated and or underperforming teachers and administrators.

Additionally, some of the following strategies considered or deployed by states to address teacher shortages in hard-to-staff areas, may have applicability to the attempts to improve the attractiveness of the overall high school teaching profession.

- Offering teachers an extra year of retirement credit for specified years of teaching;
- Allowing teachers to convert their unused sick leave into a specified amount of retirement credit;
- Offering conditional scholarships to cover tuition and salary, special home loans, low-cost rentals, moving expenses to outstanding teacher-candidates in such shortage areas as math, science, and special education;
- Offering loan forgiveness programs; and
- Implementing special preparation programs with business and the military sectors to attract early retirees and career-changers to high school teaching.

Effective teaching methods. Also, one needs to consider the effectiveness of the teaching methods currently being used to meet the needs of a more diverse, and in many respects, less motivated audience (Mellow, 2008). One promising strategy in this area is to identify and disseminate the best practice in pedagogy at high school level operating in various environments. These may include assigning mentors for struggling students; instituting extended contact hours via after school study or during traditional school vacations; using information technology such as e-portfolios and digital stories to reach the worst performing and or non-traditional students; and using popular culture media such as music, and video games, as well as other more culturally relevant narratives to weave the lives of students into the fabric of the curriculum and help create deep, reflective learning (Bradley, 1999; Mellow, 2008).

Another promising strategy involves pushing for greater investment in faculties’ ability to innovate in the classroom to expand the pool of go-to teaching methods (Mellow, 2008). This must include sustained and systemic, faculty-led professional development programs (AEEIB, 2007). To date such initiatives have depended heavily on the ability of individual institutions to attract grant funding. However, going forward, government needs to prioritize these initiatives for funding, and could subject them to a competitive process that focuses on past or potential success in similar initiatives.
It may also be necessary to change the way performance is measured to stimulate the required innovations (Jimerson, 2003). Clearly, an exclusive focus on graduation statistics is not sufficient. One needs measures, which capture the college readiness of students and give ample consideration to the varying starting points of incoming students (Mellow, 2008). Such measures would hopefully highlight the need to direct additional resources to institutions with less prepared students, and less “stimulating” home environments (e.g., parental interest in, and or, ability to assist students with, school work). The essence of these strategies may also be appropriate for higher education institutions.

Promoting Access for all Who Quality and are Desirous of Pursuing Higher Education

A key aspect of facilitating the goal of providing affordable access for all who quality and are desirous of pursuing higher education is the need to finance initiatives that improve the proportion of traditionally underrepresented groups that quality for higher education. The urgency of this objective becomes evident when we recognize (i) the continuing underperformance of Black and Latino students, and poor students in high school (Heller and Rogers, 2006), and (ii) that an increasingly large part of the US workforce will comprise members of these groups in the near future (Day, 2010). It thus becomes apparent that if the US is to regain its position as the country with the best educated workforce, a key component of economic competitiveness in the increasingly knowledge-based global economy, these groups need to access high education in greater numbers than they have traditionally, and they need to perform better at that level.

The current emphasis on merit-based grants is a major obstacle to the realization of this objective. It ignores the fact that without financial assistance (on favorable terms) member of these groups, Blacks, Latinos, and the poor, are unlikely to be able to afford higher education. This could have negative social, economic and political consequences for the members of these groups, their communities and the entire country in the future.

Helping these groups to become better educated and more marketable also has the potential to increase the country’s tax base, and to reduce the cost of social safety net programs such as food stamps, housing and energy subsidies and health care. It could also help to reduce the spiraling costs of corrections. Furthermore, to the extent that strategies that increase access to higher education for these targeted groups enhances the overall quality of the US workforce, they could help to attract capital and stimulate economic activity and employment; items critical to alleviating the higher education funding crunch. There are fewer benefits associated with government funding for the higher education of more well off students.

While an increase in need-based financing should enhance the financial ability of these groups to access higher education, closer attention is required to enhance their access academically. To address this aspect of the issue we need to find answers to
the systematic underperformance of these groups in secondary and post-secondary education. Such an examination should consider, among other things, whether it is (1) a case of students in these groups being less able than, or not applying themselves as well as, those of other ethnic or socio-economic groups, or (2) the result of systemic shortcomings involving teachers, administrators, schools, homes and or communities. To the extent that these groups are underperforming for systemic reasons, rather than due to inherent weakness of students, then attention should be directed to providing the resources needed to overcome the systemic challenges, be they better teachers, administrators, facilities, or remedial programs and get these students ready for successful higher education experiences. One way of funding such programs is to reward higher education institutions with additional funding based on their ability to attract students from these targeted/at risk populations or from areas where participation in or success at higher education is lower than average (OECD, 2001).

INSTITUTIONAL-LEVEL STRATEGIES

The primary types of strategies available to higher education institutions are the restructuring of their cost structure and the diversification of these funding sources. Whatever strategies are favored must be aggressively pursued especially during good times. No longer can the leaders of higher education institutions be surprised by shifts in business cycles. Volatility in state spending (and economic activity) should be considered the norm (Doyle and Delaney, 2009; Pattison and Eckl, 2010), especially given recent attempts by conservative lawmakers to target professional teachers and other higher education constituencies that have traditionally supported more liberal causes.

As such, leaders need to develop strategies to predict and plan for economic volatility, if they are to prosper during all phases of the business cycle. Such strategies may include the establishment of programs that enhance productivity without sacrificing quality such as course redesigns; providing students with earlier and better academic advising and class schedule management to reduce the frequency of program changes, the instances of students progress being delayed due to inappropriate sequencing of required course/pre-requisite courses and thereby reduce the number of credits needed to graduate; adopting technologies that reduce cost while increasing contact hours; closing down or consolidating under-enrolled courses, reallocations of resources across units, and increasing teaching loads (Doyle and Delaney, 2009).

The savings from such initiatives could be direct to capital development programs and or invested to help tide them over in future bad times. In states where such reassignment or carrying forward of funds is not presently allowed, leaders need to lobby lawmakers to permit such practices which could encourage savings and institutional investments. They are also likely to discourage institutions from engaging in spending primarily to avoid being perceived as having excessive budgets.
Additionally, to the extent that additional funding cuts are made during periods of economic downturn, during subsequent boom periods funding should not be automatically restored to all activities and programs that have been cut (Doyle and Delaney, 2009). Instead leaders need to re-evaluate institutional needs in the light of their current realities.

Furthermore, leaders need to make spending on teaching and learning the highest priority (Wellman, 2008). This will involve aligning spending with high priority goals such as preparing students that are “fit for purpose” (e.g., able to pass professional examinations, ready for world of work, or ready for post graduate level studies), at reasonable cost, and within reasonable timeframes. For instance, funds must be sourced and targeted at initiatives that (1) get students acclimatized into the higher education setting early, e.g., summer orientation for freshmen and transfer students, and learning communities for at risk students needing developmental preparation in math and English; (2) get students engaged in the learning process, monitor their social and academic progress, and provide early feedback to students and administrators with a view to promoting student retention and academic success; and (3) promote early and frequent communication with students and parents about the consequences of not graduating. This will require systematic lobbying of policymakers for higher funding for teaching and retention initiatives.

Also, higher education institutions must seek to diversify the sources of funding relied upon for such initiatives. For instance, they could more aggressive seek grant funding for teaching and retention initiatives; and leverage faculty, expertise and facilities to deliver programs and services to non-traditional clients – business consulting, short-term training programs, applied research services, meeting and conferences, continuing education. While most such initiatives are of questionable sustainability (Weiler, 2000), they can provide resources that could be used during economic downturns. However, the pursuit of such commercial services should not be allowed to detract from the core mission and objectives of higher education institutions, or the long-term best interests of key stakeholders (Weiler, 2000). Further, if it is deemed necessary for students to share the cost of such initiatives, the leaders of higher education institution need to lobby for addition tax relief for education costs.

Another revenue-focused strategy that has been used successfully by many leading institutions is the diversification of the target student population by appealing to international students who can usually be charged higher fees. This strategy also has the potential to decrease the average cost per student by facilitating economies of scale. Additionally, it may allow scope economies to come into play, as some higher education institutions may be able to undertake initiatives that would otherwise not be feasible or sustainable.

On a related note, if a higher education institution were to pursue a strategy of broadly diversifying the pools from which students are recruited, it could reduce its exposure to economic downturns in any particular pool, as states, countries and larger geographical regions are often at different stages in their economic cycles.
at a given point in time. This strategy also has the potential benefit of increasing the diversity of the educational experience provided by US institutions, a necessity in our increasingly globalized society. This strategy is especially attractive to institutions dealing with excess capacity, or seeking the flexibility associated with surplus demand. This strategy may also benefit less-developed countries, which might not have the capacity to develop and fund their own higher education systems. As such, higher education institutions may wish to explore direct negotiations with the government of such countries, possibly with the assistance of US diplomatic personnel on the ground. However, to be successful however, this strategy requires considerable up-front cost.

Additionally, as suggested by Doyle and Delaney (2011) institutional leaders need to explicitly discuss with state policymakers not only the level of state appropriations for higher education for one or two year period as currently prevails, but also the expectations over multiple years. This requires trust on both sides so that institutions have some assurance that states will follow through on multi-year funding promises, and states have some assurance that institutions will follow through on providing the educational opportunities needed within the state. It will take some doing to move state policymakers who have a tendency to focus on their election cycles to this longer-term orientation.

There is also a role for faculty. They need to do a better job of controlling the cost of textbooks. Developing targeted textbook cost for each course taught could facilitate this. Next, faculty could determine the prices (and other features) of the available textbook options, and work with publishers to stay within cost targets. For instance, they could consider using earlier editions of texts, or constructing custom editions containing only the material needed for their courses.

Higher education institutions can also make greater use of technologically-assisted instruction for distance learning, especially if the goal is to reach out to otherwise place-bound students, unable to travel to a common site, but able to get to remote sites to receive transmission (Johnstone and Marcucci, 2007). Distance learning can extend access at considerable savings over the alternative of placing faculty at each remote site. This approach may also be feasible if combined with the use of lower cost faculty to extend the reach of “better” institution even for traditional students. It could reduce housing and accommodation costs and student indebtedness. However, this may be a tough sell even in our highly connected and highly mobile environment where both traditional and non-traditional students seem to continue to prefer the fuller higher education experience that accompanies the physical campus setting.

Finally, attention needs to be directed at the inter-institution competition via accommodation, sporting programs and facilities, including high priced coaches for programs such as football and basketball. Leaders need to re-examine whether such expenditures represent the best use of available funds given targeted education goals. Then, even if leaders concluded that such expenditures warranted the funding
priorities they currently enjoy, leaders would still need to ensure that such initiatives were implemented in the most cost-effective manner.

**Government-Level Strategies**

At the level of government, local, state and federal, policy makers need to recommit to the idea that a high-quality, broadly accessible and affordable system of higher education is one of the preconditions for the US maintaining its leadership role in international business, economics and politics. This is especially important in our knowledge-based economy as human capital is the key to sustainable, competitive advantage (Coff and Kryscynski, 2011). Such a recommitment is also critical for all Americans to have a realistic chance of realizing the American dream. It is only through such a recommitment that the funding of higher education will not be one of the causalities of the current financial gridlock facing the country.

These high stakes, together with the previously noted relationship between the financial gridlock facing the country and the high cost of several high priority policy initiatives such as defense, health care, social security and the Republican Party’s pledge to not increase taxes on anyone under any circumstance, suggest that any long-term resolution will require frank discussions among all stakeholders – the federal government, state governments, higher education institutions, financial institution, students, the corporate sector and the public at large (Weiler, 2000).

Additionally, as suggested by Zumeta (2009) it may be helpful for policymaker to frame such discussions in the context of (1) what actions are needed to secure the long-term international economic competitiveness and political influence of the US, and (2) the actions taken by the federal governments to deal with the threats posed to the US and global economies by the busting of the housing bubble and the faulty securitization practices of Wall Street and the Financial Sector. While most would agree that these challenges were more urgent than the current higher education funding crisis, hopefully there would be considerable debate about whether they were more critical to the countries long-term success. Policymaker should also make explicit the likely consequences of failing to fund higher education at appropriate levels including the likely need to lower the collective wealth and influence expectations of American, and the collective levels of assistance that will be necessary for large sections of the population.

Finding a long-term solution to the higher education funding dilemma will also require willingness on the part of all involved to re-examine the status of competing goal and priorities and the policy initiatives that are likely to increase the pool of available resources. For example, Republican politicians will need to recognize that taxes represent only one element of the competitive environment and consider whether businesses and their other constituencies may find the mix of a higher quality workforce and higher taxes acceptable in the knowledge economy to the extent that it helps them to realize their objectives. Similarly, Democratic politicians will need
to engage their constituencies with a view to streamlining entitlement programs. Also both parties need to look critically at national defense spending.

Ultimately, a the resolution of the financial gridlock facing the US economy in general, and higher education in particular, will depend of the persuasive powers of the voting public, and appropriately so. In this regard the recent successful recall efforts in Ohio and Michigan based on concerns about the education policy of Republican legislators offers hope that at least some members of the electorate still view higher education as a high priority, and are willing to take steps to get like-minded individuals into policymaking positions. Another positive indicator of the publics’ willingness to challenge the priorities of policymakers is the positive attention given to the recent protests of the “Occupy” movement, part of which was aimed at issues related to higher education funding.

Strategies are also needed to redress the shortcoming of the existing financial aid system. First, given the large and growing importance of loans to the funding of US higher education, it is essential that some attention be paid to their effective design. Ideally, such efforts will seek to develop a more coherent funding strategy aimed at clearly specified and prioritized goals and objectives, hopefully broad-based access to high quality education. The most recent initiatives by the White House which (1) reduced the salary threshold committed to the repayment of higher education debt under the income-based repayment program from 15% to 10%, (2) will forgive outstanding loan balance after 20 years of payments for federal loans issued after 2012, (3) allows consolidation of Federal Family Education Loans and Direct Loans at a modest reduction in interest rates (0.25%), and (4) discharges the loan balances of eligible persons who work 10 years in a public service job, are steps in the right direction (Block, 2011). However, they represent the continuation of the government’s piecemeal approach to higher education financial aid, as a large proportion of student debt will not be affected.

A more coherent restructuring of higher education financial aid would target all or most students, and could entail initiatives such as (1) adjusting permissible loans to levels capable of meeting the increasing tuition and accommodation costs, (2) reducing the administrative cost to state and federal agencies, and higher education institution and other participants in the system of financial aid by enhancing the efficiency of loan collection mechanisms by linking repayments to either social security or income tax collections, and (3) streamlining the financing terms offered across the different loan programs towards the more favorable attributes of each. For instance, the allowable repayment period of loan programs could me moved closer to the 30 years limit that is currently available under the US Direct Lending Program, and the interest subsidies that are provided during periods when payments are suspended due to financial hardship under subsided loans could be extended to students pursuing education programs with lower wage premiums. Alternatively, the limited pool of funds could be targeted to potentially high impact areas. Such targeting could be based on a combination of one’s probability of success – i.e., merit, and one’s ability (or lack thereof) to access the higher education system despite being
academically qualified, i.e., need. The weight assigned to each of these competing
distribution criteria could be evaluated based on their potential consequences for
the realization of high priority state and national educational, social and economic
objectives.
Second, attention is needed to reform the grant system. While at first glance
merit-based grants seem desirable from accessibility, equality of opportunity and
performance incentive perspectives, on closer focus it appear that they may have
built-in biases against the poor. If those in the least academically advantageous
situations (e.g., more dangerous environments, cannot afford tutors or extra help,
parents less academically qualified, more at home responsibilities, need to work
longer hours to help finance their education, less motivated and less able teachers,
less capable administrators) are competing with those able to pay and benefiting
from more advantageous circumstances, the playing field may not be as level as
we presume. Even if all students who achieve specified standards get government
funding, there might still be a need to help poorer students achieve the standard,
enroll in higher education and complete programs. Also, we may not be getting the
best returns to our investment in higher education by funding persons not in need
to the detriment of the more needy population. Additionally, grant amounts need to
be livable.
Further, government leadership may be needed in charting a course that makes
greater use of shorter cycle, less expensive, less selective, and more vocationally-
oriented programs; and more teaching-oriented, hierarchically managed institutions,
where appropriate (Mellow, 2008). This strategy assumes that not all jobs require
four-year degrees. It could help to reduce the per-students cost of higher education
and the duration of higher education. This would allow more students to join the
workforce earlier, to their benefit and that of employers and the wider economy.
It is supported by the fact that American community colleges, despite enrolling
almost half of all undergraduate students, spend 80% less than public four-year
counterparts per student. Public community colleges spending averages $9,183
per student, while spending for 4-year public college students averages $27,973
a year (Mellow, 2008). Similarly, Foster (2008) reported that from 1995 to 2005,
after adjusting for inflation, average tuition and fees increased by 35%, 51%,
and 30% at private four-year colleges, public four-year colleges, and community
colleges, respectively. Even after considering the imperfections in such per
student comparisons due to the differing complexities of two-year versus four-year
institution and cross-subsidization between faculties, programs and levels of higher
education, the potential cost saving may be substantial.
Federal and state policymakers also have a role to play in creating an environment
for informed and responsible behavior of students and their families where they
can overcome the socio-cultural barriers to post-secondary education. This could
include requiring, or strongly encouraging, high schools to include a higher
education financing component in the financial literacy programs targeted to high
school juniors and seniors, and their parents. Such education may help overcome the
tendency for lower-income individuals to base their cost-benefit evaluating of higher education on incorrect, incomplete or outdated information, frequently leading to underinvestment in higher education.

Policymakers should also consider strategies that diversify the sources targeted for higher education funding. One such strategy, which is based on the notion that all constituencies that benefit from higher education should contribute to its funding, advocates for charging organizations that employ higher education graduates, or those that profit from the financing of higher education (e.g., financial institutions) a fee. There are major drawbacks of this strategy. First, it targets the most powerful players in American politics and will meet with aggressive opposition. Second, it is very likely that increased business costs associated which such a fee will be passed on to customers in the form of higher prices. Policy makers in some states have also explored the option of levying state taxes on the wealthiest not-for-profit, private higher education institutions to help finance poorer institutions (Wellman, 2008).

In addition to the strategies outlined above which seek to (1) change the mindset of policymaker to give higher priority to higher education as a way to increase the resources available to meet policy priorities, (2) facilitate operating efficiency, (3) respond appropriately to the financial circumstances of targeted populations, and (4) promote the diversification of higher education funding sources, policy makers need to consider strategies that will reassess the desired levels of targeted outcomes.

The federal government must also be careful to avoid initiatives that create a disincentive for states or higher education institutions to invest in higher education during good times. One example of such an initiative is the 2008 reauthorization of the Higher Education Act, which allowed the Department of Education to withhold College Access Challenge Grant funds from states failing to maintain annual gains in their higher education appropriations, at least at the average of the previous five years (Zumeta, 2009). While this was a commendable effort to stabilize the level of state funding for higher education, it may end up hurting higher education by providing a disincentive for states to invest in higher education during good times for fear of being penalized during downturns. Similar disincentives are associated with initiatives that automatically reduce government funding to institutions that are successful at diversifying their funding sources (Doyle and Delaney, 2011).

Finally, to the extent that policymakers choose to use performance-based funding as a strategy to improve higher education accountability and effectiveness, they need to recognize the pre-condition for its success; namely (1) the adoption and prioritization of policy goals and objectives that are contextually and institutionally appropriate, and (2) the use of said goals and objectives to drive the selection of performance indicators (Layzell, 1999; Weiler, 2000). Policymakers must also take steps to ensure that higher education institutions start with appropriate levels of core resources, as performance-based funding is especially appropriate for allocating additional funding for agenda and area-based projects on the basis of specific federal and state policies and priorities (Schiller and Liefner, 2007).
At the individual level students and their families need to accept responsibility for the choices they make regarding higher education, which are some of the most significant investment decisions they will ever make. Parents and guardians (and spouses in the case of non-traditional students) need to be involved in these choices to the extent that they are likely to be affected. They need to engage their children (students) in an early discussion about the importance of higher education, the opportunities it creates, and the costs and sacrifices it entails. Parents can also help instill a healthy work ethic and the ideal of deferred gratification for greater long-term rewards. Additionally, parents can demonstrate the need to prioritize the financing of higher education, starting early in the school life of children, by setting aside funds, however small, for that purpose and by involving their children in the process. One of the goals of these and other activities is to help children appreciate the connection between rights and responsibilities.

By the time high school students are called upon to participate in the making of higher education choices, they must be fully aware that choices have consequences. They need to appreciate that while each student has the right to choose to attend any higher education institution, subject to his/her abilities; those choices have potential financial (and other) consequences that will last a long time. For instance, students need to be conscious that by deciding to attend a school that is located beyond a reasonable driving or commuting distance from home, as attractive as that option may be for their independence and social life, they are committing to additional accommodation and personal expenses. These costs must be defrayed by some combination of drawing on savings, securing grants or loans, and working additional hours during school time; all of which mean that those resources will not be available for other purposes. Additionally, students need to be conscious of the potential costs and benefits associated with different higher education programs and careers. Such information need to be combined with factors such as likes, abilities, what our friends are doing, and where else is the desired program offered in order to increase the odds that they will be happy with their choices in the long-run. It may also be useful to explore the option as starting at the community college level and transferring to a bachelor’s program at another institution. They must also be aware of the likely long-term financial and other consequences of choosing not to pursue higher education.

Clearly, not all parents and guardians are equipped to provide this guidance and instill these qualities effectively. This is where the community enters the picture. Parents and guardians need to be open to, and actively seek out assistance from schools, churches, non-governmental organizations and online sources, to properly discharge these responsibilities.

Additionally, schools, churches and other community organizations need to reach out to at risk students and parents and engage them in discussions about higher education. For instance, teachers and school administrators can share good news about
students’ academic successes and efforts with parents in a timely and more frequent manner. This will make it easier for parents to have confidence in the academic future of their children, and to praise them at home. It also supports the work done in school and creates entry points for discussions about higher education. Similarly, these organizations can provide opportunities for high school students to interact with college students and graduates to get a better feel for what it takes to get ready for, and succeed in, higher education; and the opportunities available in, and via, higher education. This may help high school students to overcome self-doubt, and promote their curiosity about, and interest in higher education. Furthermore, to the extent that some students feel more at ease in the environment of churches and other community organizations, such organizations may need to offer academic programs that focus on remediation, assistance with SAT/AIDS preparation, and other needs detected in the community.

The picture that emerges from this attempt to re-imagine the funding of higher education is that it will take buy-in from all stakeholders into the importance of providing affordable higher education access to a broad cross-section of the population goals for the country to realize its long-term social, economic and political objectives. It is also clear that all stakeholders will need to pay their fair share as it is not feasible, and very risky, to continue to ask students and their families to bear an ever increasing share of the higher education burden.

NOTES

1 According to Barr (1993) and Cigno and Luporini (2009) while there is widespread belief in the external benefits of higher education (i.e., how the education of A affects the productivity of B), it is difficult to quantify. Additionally, higher education tends to increase one’s earnings and thus his future tax payments. This is essentially a dividend to society if higher education is funded by students and may warrant discussions about subsidies.

2 For several decades the percentage of American less than 35 years old that had earned a college degree has been 40%. It remained at that level in 2009, ranking the US 12th out of 36 countries ranked by the OECD (2011).

3 Nationally, while only about 60% of those students selected to complete (bachelor’s) degrees do so, less that 30% of the open access students of community colleges complete associate degrees (Mellow, 2008:3).

4 For instance, the College Board (2003a) reported a significant gap of almost 30% in the college participation rates between the rich and the poor.

5 Engle and Theokas (2010) reported that racial gaps in degree attainment have increased, even as minority participation in higher education has increased.

6 One indication of this trend is that between 2000 and 2009 the number of Hispanics, Black or African American and whites in the US population rose by 13.1 million, 4.7 million and 4.3 million, respectively. (US Census Bureau, statistical Abstract of the United States: 2012a). Also, while the proportion of the US population below 35 year earning bachelor’s degrees has remained constant at 40% between 1999 and 2009 (OECD, 2011), the proportion of Hispanic and Black Americans earning bachelor’s degrees has increase from 3.1% and 5.8% to 8.1% and 9.8%, respectively (U.S. Census Bureau, 2012b). Additionally, Lee and Mather (2008) reported that the Hispanic workforce is project to grow from 13.3% in 2005 to 24.3% in 2050 at the same time that the proportion of non-Hispanic whites in the workforce is projected to decline from 69.6% to 51.4%.

7 AEEIB (2007) reported that an estimated 85% of current jobs and almost 90% of the fastest-growing and best paying jobs now require some postsecondary education.
RE-IMAGining Higher Education Funding

For instance, Morrison (2003) reported that an increasing proportion of high school graduates are enrolling in higher education (67% in 2003 versus 56% in 1980), at the same time that the size of the high school graduating class was projected to grow by more than 20% between 1996 and 2005. He also noted projections for a 33% increase in the number of Americans taking adult education between 1995 and 2004.

That commitment is due partly to the view that tax increases (1) would facilitate the intrusion of government into areas that should be left to the discretion on individuals and (2) make the US more unattractive (it is already a relatively high-tax jurisdiction) to investors and drive them to locate in more tax friendly location with negative effects for economic growth, employment and social welfare, and stifling the fledging economic recovery.

This focus on revenue-based arguments is related to the difficulty of isolating and quantifying the relative efficiency of the different programs.

The College Board (2011) reported that state appropriations per full-time equivalent student (in constant dollars) declined by 9%, 6% and 4%, in 2008–9, 2009–10 and 2010–11 fiscal years, respectively; and is currently 23% lower than it had been a decade earlier.

For instance, Clanton (2011) reported that the prices of textbooks have increased at twice the annual rate of inflation for more than 20 year and have long represented the third major component of higher education cost after tuition and accommodation.

Morrison (2003) noted projections for a 33% increase in the number of Americans taking adult education between 1995 and 2004.

An internationally competitive higher education system also has to the potential to advance US positions in global ideological debates as it facilitates transmission of knowledge and ideologies across borders without much, if any, control or even regulation by local or nation state governments. Some would argue that these realities should lay the groundwork for increased higher educational investments by both students (and their families) and governments.

Beginning in 1980, the college wage premium began a steep rise, driven both by increases in the earnings of college graduates, and stagnating wages for those with less education (Heller and Rogers, 2006). The College Board (2011) reported that median earnings of bachelor’s degree recipients working full-time in 2008 were $21,900 more than that of high school graduates, while individuals with some college but no degree earned 17% more than high school graduates.

Conversely, to the extent that countries that have higher education systems that are high quality, oriented to needs of employers, and broadly inclusive, then to have better educated workforces and can more effectively compete in international markets a case can be made for state subsidies for higher education.

For the 2009–10 FY, annual prices for undergraduate tuition, room, and board were estimated to be $12,804 at public institutions and $32,184 at private institutions. Between 1999–2000 and 2009–10, prices for undergraduate tuition, room and board at public institutions rose 37 percent, and prices at private institutions rose 25%, after adjustment for inflation. (U.S. Department of Education, National Center for Education Statistics (2011).

According to The College Board (2003b) in 1980 approximately one-third of all financial aid in the US was in the form of loans, and 63% was awarded in the form of grants; by 2003 this shifted to 54% of funds being awarded as loans and 40% as grants (with the remainder in the form of work study and tax credits). Orozco (2010) indicated that these proportions had changed to 64% and 26% for loans and grants, respectively in 2008.

At the level of the states, which awarded $6 billion in grants to students (in contrast to $15 billion awarded by the federal government), the percentage of aid awarded without consideration of the financial need of the student and her family increased from 9% in 1992 to 27% in 2002 (National Association of State Student Grant & Aid Programs 2004).

Also, according to Marcus (2011), universities and colleges are giving $5.3 billion in aid this year to students who the federal government say don’t need financial help in an attempt to attract the best students and to curry favor with high-income families that can write a check for the rest of the tuition.

Foster (2008) reported that 62% of recent college graduates have student loans. Similarly Block (2011) reported that about two-thirds of graduates with a bachelor’s degree have student loans and
the average debt is about $24,000, while 10% of undergraduates have loans of $40,000 or more. Also, according to Cauchon (2011:1) “the amount of student loans taken out last year crossed the $100 billion mark for the first time and total loans outstanding will exceed $1 trillion for the first time this year.” Cauchon (2011) also reported that students are borrowing twice what they did a decade ago after adjusting for inflation and total outstanding debt has doubled in the past five years.

This at the same time that the percentage of the U.S. population that is classified as poor is increasing; according to figures reported by the U.S. Census Bureau (2011a) the average poverty level rose from 11.3% in 2000 to 15.1% in 2010, at the same time that the total population grew by 9.59%.

Kelly and Jones (2007) and Liefner (2003) provided empirical findings suggesting that student quality is a key determinant of higher education success.

AEEIB (2007) reported that one third of students who make it to college must take remedial courses, costing the nation over $1.4 billion every year at community colleges alone.

If the secondary and elementary levels of education are accorded higher funding priority than higher education – a reasonable presumption as they are mandatory and generally not fee-based – it may be easier to secure funding for remediation done at those levels.

In an empirical study of “prestigious” higher education institutions in the US, Great Britain, the Netherland and Switzerland, Liefner (2003) found that the primary determinants of long-term success were the quality of academics and the quality of students (in terms of qualification and motivation). However, no specific definition of “success” was employed in this study and it is very likely that factors other than the fitness of graduates for the market we heavily weighted as the focus was on the traditional research and entrepreneurial focused institutions.

For example, Heller and Rogers (2006) reported that in Michigan there are large gaps in scholarship qualification among students of different racial groups – African American, and Hispanic tending to lag with the lowest qualification rates and the highest drop-off in qualification rates from the second to the third cohort of students. On the other hand, white and upper-income students – exactly the groups who have had the highest college-going rates in the US – receive a larger share of the grants. Similarly, ACT (2011) reported that just 4% and 11% of African American and Hispanic students, respectively met the benchmark on all four subjects in 2011 compare to 41% and 31% for Asian and White American students, respectively. Additionally, Eckel and King (2004:16) reported that “… despite significant expenditures on financial aid, minority and low-income individuals are still less likely to attend college than white students and those from middle- and upper-income families – although the gaps have narrowed.”

According to the U.S. 2010 survey data the proportion of the population that was non-Hispanic White, Black and Hispanic, stood at 63.7%, 12.6% and 16.3% respectively (U.S. Census Bureau, 2011b). Day (2010) projected that by 2020 less than 53 percent of the U.S. population would be non-Hispanic White, 16 percent would be Black and 23 percent would be of Hispanic origin.

Engle and Theokas (2010) asserted that most minority students are still educated in schools that get less of everything, from money to science labs to high-quality teachers. Also, Breaden (2008) reported that in the U.S. 68% of upper-income students in 8th grade had high-quality math teachers compared to only 53% for low-income students.

Education Week (2011) reported on two ongoing initiatives along these lines in California and Michigan.

Citing the College Board, Marklein (2011) reported that public four-year universities charged residents an average of $8,244, up 8.3% over 2010, while two-year schools charged an average of $2,963, up 8.7%


AFFILIATION

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