



From *Degrees That Matter:*

Moving Higher Education to Learning Systems Paradigm

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INTRODUCTION

The rhetoric around higher education in America has been bogged down in an unproductive—perhaps even counter-productive—debate in recent years. That debate has taken up “use” and “purpose” as its keywords and focused on a dichotomy of utility in the economic or political worlds and purity of education for education’s sake. The debate is one that has become so prevalent that it has begun to shape, sometimes in dramatic forms, education legislation, policies, and reform initiatives, with legislators decrying “degrees to nowhere” and budgeting money to promote and develop programs in the STEM fields on one side. On another, some academics and educational organization leaders call for a more civic-minded approach, while on yet another side, many faculty lament the devaluing of knowledge as a worthwhile end in itself.

The driving question: What is the purpose of higher education in America? The question is hotly debated, with an often divisive frame for its answers: the preparation of qualified employees, the development of engaged citizens, or the personal fulfillment of individuals’ intellectual, social, and psychological needs. The first, and often the loudest, voice emphasizes the role of higher education in training a workforce that can fill jobs for the 21st Century and

thereby help to advance the American economy. For example, as reported by Kolowich (2011) in a piece by *Inside Higher Ed*, in his 2011 speech to the National Governors Association, Bill Gates assumed an educational system geared towards preparing employees. Calling for a metrics-based self-evaluation of higher education, Gates observed that data can enable campuses to identify the degree to which individual programs live up to subsidies by launching prepared students into the workforce, with STEM and vocationally-aligned fields proving of greater value, in his mind, than disciplines in the humanities and social sciences. A year later, *The Economist* argued that:

Universities owe it [dealing with their inefficiencies] to the students who have racked up \$1 trillion in debt, and to the graduate students who are taking second degrees because their first one was so worthless. They also bear some responsibility for the 17m who are overqualified for their jobs, and for the 3m unfilled positions for which skilled workers cannot be found. They even owe it to the 37m who went to college, dropped out and ended up with nothing: many left for economic reasons.

Both arguments revolve around the economics of higher education in relation to the economy at large, with students positioned as education consumers and future employees. It is likely not coincidental that these calls followed the publication of Richard Arum and Josipa Roksa's (2011) *Academically Adrift in America*, a book that has been repeatedly cited by critics of US higher education as describing the heart of the issue. Arum and Roksa's *Academically Adrift* implicitly calls for accountability in higher education, but that call seems to have been reduced to metrics that focus on employability. Non-STEM or non-vocationally-aligned programs are left with a question hanging over them and are dismissed as "degrees to nowhere."

In Utah, State Senator Howard Stephenson coined this term, arguing that degrees in the humanities and social sciences put undue stress on limited educational budgets and left students unprepared for careers (Maffly, 2011). Similarly, in Florida, Governor Rick Scott proposed in 2012 a strategy to reduce students in “degrees to nowhere” fields and towards STEM fields by differentiating tuition (Alvarez, 2012).

The second voice points to higher education’s role in nurturing men and women as individuals who think critically in their personal lives and are active participants in American democracy. Liberal education differs from this more vocationally-oriented model of education by its emphasis on a well-rounded education that promotes critical thinking and the so-called “soft skills” that are more difficult to measure. According to the Association of American Colleges and Universities (AAC&U) website,

Liberal Education is an approach to learning that empowers individuals and prepares them to deal with complexity, diversity, and change. It provides students with broad knowledge of the wider world (e.g. science, culture, and society) as well as in-depth study in a specific area of interest. A liberal education helps students develop a sense of social responsibility, as well as strong and transferable intellectual and practical skills such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings (<https://www.aacu.org/leap/what-is-a-liberal-education>).

While AAC&U’s definition suggests a broadly applicable use of learning—a point to which we will return below—other thinkers within academic communities assert this position in terms directly opposed to the vocational argument described above. Martha Nussbaum (2010), for example, makes a fervent call for a different model, one driven by civic needs:

Thirsty for national profit, nations, and their systems of education, are heedlessly discarding skills that are needed to keep democracies alive. If this trend continues, nations all over the world will soon be producing generations of useful machines, rather than complete citizens who can think for themselves, criticize tradition, and understand the significance of another person's suffering and achievements. The future of the world's democracies hangs in the balance (p. 2).

For Nussbaum, higher education's chief point is the acculturation of thinking citizens capable of maintaining rule by the people, and the turn she perceives towards education as job-training threatens that primary cause. Other writers, often and understandably coming from disciplines in the humanities, think similarly, with literature specialists such as Rita Felski (2008), , arguing for the importance of literature as an avenue to self-knowledge and knowledge of others, essential elements to participation in communities. A liberal education that revalues the humanities, thusly, becomes a tool for preparing sensitive, thinking citizens not blinded by rhetoric or numbed by sound-bite media cultures.

Quietly thrumming along, the final voice shares its belief in the importance of college and university education in developing knowledge and intellectual growth, but rarely does so in public media. A poll conducted by *The Chronicle of Higher Education* and the Pew Research Center (Taylor, et al, 2011), suggests that graduates of higher education see the greatest benefits of a college or university degree to be "knowledge and intellectual growth" at 74% of respondents rating higher education "very useful" and "personal growth and maturity," at 67% of respondents rating it "very useful," with "preparation for job or career" trailing at 55%. Those statistics will, no doubt, cheer faculty such as David's colleague who argued that "the minute we engage in the utility conversation, we've lost," since they indicate that graduates value their

education for personal benefits. This argument assumes a knowledge for knowledge's sake philosophy that enhances an individual personally.

The problem revealed by the *Chronicle/Pew* statistics, however, is the belief among many graduates that “college didn't teach me anything.” While anecdotal, Natasha's experience in conversing with seat partners on airplanes points to a concerning reason for the statistics. When she explains that she works for a research institute that tries to determine how we know if university students are learning, the most frequent response is “I didn't learn anything in college.” In the ensuing conversations, a pattern has emerged: students do not associate their learning in higher education with the kinds of activities and soft skills that they use in their work lives. They associate “learning” with subject content, such as who won the battle of Orange, what marks that scientific genus, or what period of art produced these works. They fail to see, in other words, how their college or university experience developed the abilities and skills that enable them to be successful in their work lives. That should be a concern for everyone involved in higher education.

The problem is that this is the wrong debate entirely.

In fact, there should be no debate—at least not in this particular area of higher education. As the debates around the purpose of higher education have continued, fundamental issues have been obscured. Despite the presence of three voices in this seemingly disharmonious chorus, ultimately they combine to form atonal music akin to that of composers like Béla Bartok. While all singing different lines, all three ultimately ask to what college and university education should be aligned. The economic and civic applications are obvious, but even the fulfillment argument is one of application to personal ends. All three assume a particular end to higher education, and all three see that end as an applied one. In the process of their discordant singing,

the parties of these debates have missed this fundamental commonality, one that need not promote exclusive answers. In other words, higher education can and does serve all these ends. The passage above from the Association of American Colleges and Universities addresses this point directly in its assertion that “liberal education helps students develop a sense of social responsibility, as well as strong and transferable intellectual and practical skills.” The term “transferable” speaks directly to myriad possible points of transfer. Students can transfer their learning to economic ends, to civic engagement, and to personal fulfillment.

What has motivated the utility debate? A variety of factors, including the rising costs of higher education, its accessibility, and the effectiveness of its work. Each of these has been rolled under the concern for accountability. These national debates, particularly as they relate to the economic end for education, seek ways of measuring the effectiveness of institutions. For example, in the early considerations of the Obama administration’s proposed report card for colleges and universities, employability of graduates arose as a possible criterion for measuring the success of institutions, and debt to income ratios continue to receive some support. Historically, accreditation processes have been and remain the primary means of assuring institutional accountability. While fiscal management and other such factors figure into the evaluation of institutions, student learning often stands as the primary area of interest, at least for faculty, who are responsible for documenting evidence of student learning and, thereby, demonstrating institutional success in the bedrock mission of colleges and universities.

Few things set off frustrated mumbling among faculty more than discussions of accountability and the assessment of student learning. A host of reasons exist. Accreditation, to some, is the imposition of standards from outside bodies. For others, accreditation imports business models into systems that, despite the rise of for-profit institutions, are not organizations

to be managed by tried and true corporate strategies—apples and oranges, they say. Others, still, bemoan the excessive work that accreditation-driven assessment heaps upon them, with the demands to fit data into easily digestible reports and tables. None of these activities, go these arguments, actually jibe with educators’ core mission to teach their students.

The accountability imperative can be recast dramatically if we shift the frame around the debates of higher education’s purpose. Rather than being preoccupied with a “what” question, faculty, administrators, and education policy-makers would do better to ask a “how” question: How is what students learn in college *aligned* to these three needs motivating higher education? Turning to this “how” question reorients the debate away from ends-based arguments that ossify into exclusive categories towards praxis-oriented explorations of what colleges and universities *do* to assure that their programs are developing the kinds of learning that equip students to make application to each of these three areas. Reorienting in this way encourages a turn away from outward facing arguments to inward-facing reflection on the strategies used by institutions of higher learning to clarify for students the ways in which the variety of studies in diverse disciplines equips them to be productive employees, engaged citizens, *and* fulfilled human beings. As any faculty member in any discipline will say, their disciplines prepare students for all three arenas. The question is, as we have just said, how?

The “how” question challenges us as faculty, staff, and administrators, to examine how we have designed learning experiences for students. If we accept that our institution strives to help students learn for each of these three purposes, then we are led to consider to what extent our institutions have developed curriculum and co-curriculum that enable students to transfer learning to these distinct—but not mutually exclusive—areas. The “how” question leads us to ask a series of more specific, self-examining questions:

- What do we want our students to learn?
- To what extent does our curriculum and co-curriculum encourage students to learn what we want them to learn?
- What other approaches might we employ to ensure that our students are proficient in these areas?
- Whom might we benefit from including in our efforts to help students learn?
- Where does students' learning get reinforced and developed?
- How are we helping them apply their learning to the different spheres of their lives?
- How—and to what extent—do we see our students succeeding or struggling in their learning?

These are questions that those of us working in higher education are (mostly) accustomed to asking, but in this book we will argue that the common answers to date have been constrained by rigid institutional and systemic structures that have hindered the kinds of productive thinking that is possible. We have witnessed revitalization in institutions that break down those structures to realize the potential of their individual, unique campuses. This book will help faculty, staff, and administrators on college and university campuses try to engage in processes of reflection that seek answers to the “how” question (and the ancillary questions that follow from it) and do so from context-specific considerations of program design, curriculum, co-curriculum, pedagogy, and their impact on student learning.

By doing so, institutions and the communities of faculty, staff, and administrators can move away from the counterproductive frames that the utility debates have installed. Reorienting practice around student learning and reflective approaches to fostering it has the potential to reinvigorate practice on college and university campuses around a shared mission to improve the

lives and futures of students by building coherent curricula and co-curricula that better achieve our desired ends. In the process, the concerns with accountability and accreditation, we argue, will largely resolve themselves by leveraging the kinds of activities faculty and staff already do.

TWO TOOLS FOR REFLECTION

This book draws upon two recent initiatives in the United States: the Tuning process, adapted from a European approach to breaking down siloes in the European Union educational space, and the Degree Qualifications Profile (DQP), a document that identifies and describes core areas of learning that are (or should be) relatively common to institutions in the US. Together, Tuning and the DQP have provided faculty, staff, and administrators tools for asking the “how” questions and thinking reflectively about what they do and the ways in which they might do it differently. Many of our examples are drawn from site visit reports, self-reported activities, workshops, and project experience collected by the National Institute for Learning Outcomes Assessment (NILOA) between 2010 and 2016. In that six-year window, NILOA witnessed the use of Tuning and/or the DQP in hundreds of institutions nationally.

Our examples illustrate the kinds of practices the book describes, but are not meant to be templates or models. As will become a recurring theme, context matters. We are not suggesting a “one size fits all” approach. On the contrary, what yielded success on one campus may not have the same impact on another. Each institution serves different demographics, has different resources, adheres to different missions, and exercises different curricular models. Those—and other—areas of distinctiveness will shape the way your own institution may engage with these tools (or any others, for that matter) and the results of those efforts, and they should. What is common, however, are the kinds of questions to be asked and the types of strategies for answering them. That is what this book provides. But before moving into an outline of the book

and how the pieces fit together, it is useful to provide some background on DQP and Tuning as well as a bit about ourselves.

What are the Degree Qualifications Profile and Tuning?

The Degree Qualifications Profile is an outline of agreed upon learning at three distinct degree-levels, the associate, baccalaureate, and master's. It provides a list of proficiencies in five areas, regardless of degree. It serves as a reference point for what students should know and be able to do, regardless of major, upon graduation. It does not prescribe content or pedagogy, but provides a reference point for degree-level learning. Tuning is a faculty-driven process of determining in a specific field of study what a student should know and be able to do upon completion of a degree so together, DQP and Tuning paint a picture of comprehensive student degree-level learning culminating in a shared understanding of what it means to say one has a degree in X in terms of learning. As tools, they help focus upon student learning as opposed to proxy measures such as time to degree or number of courses completed.

The Degree Qualifications Profile emerged out of conversations around the need to return the US to a position of educational dominance with the highest proportion of college graduates. Yet, giving more people degrees is quite easy if they are not of high quality. Thus, it is not enough to have more citizens hold degrees or credentials, they need to earn high quality ones. Defining what it means to be a high quality degree is not an easy task because there is not a shared picture of quality in postsecondary education. To address this gap, Lumina Foundation facilitated several discussions in 2009 with US and European educators, association leaders, government officials, and postsecondary administrators. The group, after much deliberation, arrived at an agreement that what was needed was a framework, or a profile, that served to define degrees in terms of learning, but in a way that was distinctively American. Through further

meetings, debates continued on the best way to develop such a framework and a path forward was offered to appoint a small panel with considerable experience in higher education to review various models and frameworks, culminating in a draft document that could be tested in the field. Released in July 2011, the first draft of the Degree Qualifications Profile was offered to the field of higher education for testing. The four authors of the document were: Cliff Adelman, a senior associate at the Institute for Higher Education Policy; Peter Ewell, then vice-president of the National Center for Higher Education Management Systems; Paul Gaston, trustees professor at Kent State University; and Carol Geary Schneider, then president of the Association of American Colleges and Universities (AAC&U). Carol's involvement as an author was key due to the development by AAC&U of the Liberal Education America's Promise (LEAP) Essential Learning Outcomes (ELOs), a framework which influenced and helped to align the development of the Degree Qualifications Profile. The authors were clear that their intentional use of the word "profile" was not in name only, but served as a signal that the DQP was not attempting to standardize degrees or limit institutional uniqueness. Instead, the profile allows faculty to explore how specific degrees fit into the DQP, allowing the DQP to act, as one author Peter Ewell likes to say, a universal translator, allowing various groups to talk with each other about how they fit into degree preparation.

The Degree Qualifications Profile was also intentionally written with active verbs emphasizing what students actually should do to demonstrate learning, through embedded assignments, and outlined descriptions of what every graduate at a given level of degree attainment ought to know and be able to do. With the release of the draft document, or beta document, various groups initiated institution-led projects to explore the utility of the profile. The National Institute for Learning Outcomes Assessment (NILOA) was tasked with mapping

and tracking the work of institutions using the DQP to better understand the various ways in which the profile could be applied, but also to gather evidence regarding what needed to be changed. Over a three-year period of data collection and study, feedback was gathered, culminating in a release in October 2014 of the revised Degree Qualifications Profile document.

The five areas of learning now include:

- Specialized knowledge, what students should demonstrate with respect to their field of study
- Broad and integrative knowledge, where students apply and integrate learning from different broad fields
- Intellectual skills, composed of analytic inquiry, use of information resources, engaging diverse perspectives, ethical reasoning, quantitative fluency, and communicative fluency
- Applied and collaborative learning, emphasized by what students do with what they know
- Civic and global learning, where students engage with and respond to civic, social, environmental, and economic challenges

At present, 740 institutions have or are currently using the Degree Qualifications Profile.

The National Institute for Learning Outcomes Assessment (NILOA) collected various points of data on DQP use from 2011-2016. In examining the various ways in which the DQP was used, NILOA followed Lumina-funded projects, collected more than 1,000 institutionally completed reports on DQP use and activity, undertook 15 case studies of DQP use, and examined 25 institution-authored examples of practice, as well as undertook surveys of administrators and faculty within institutions. It is from this vast collection of data, as well as participation in the

project meetings, providing support to institutions on the ground, and developing tools and resources to support engagement with DQP and Tuning upon which this book draws.

Since the DQP was a document made without a specific intended use in mind, the various funded projects that engaged with the DQP took on different approaches to engagement and use. The Accrediting Commission for Community and Junior Colleges (ACCJC) launched a Degree Qualifications Profile Project with a cohort of institutions examining the potential of the DQP to enhance educational quality, increase institutional effectiveness, and promote continuous quality improvement in higher education. The American Association of State Colleges and Universities (AASCU) worked with three university systems to test the feasibility of the DQP within the unique context of each system. The Association of American Colleges and Universities (AAC&U) worked with assessment professionals, faculty, and policy leaders from multiple states in the Quality Collaboratives project, focused on two- and four-year partner institutions and issues of transfer. The Council of Independent Colleges (CIC) selected 25 institutions to work as a consortium to examine the usefulness of the DQP to improve student learning as well as the applicability of the document in an independent liberal arts-oriented college context. The Higher Learning Commission (HLC) used a new model of accreditation referred to as Open Pathways, to explore DQP use for accreditation. The Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) brought together 22 Historically Black Colleges and Universities (HBCUs) to use the DQP to map curriculum in order to identify strengths and weaknesses. The WASC Senior College and University Commission included 29 institutions exploring the use of the DQP as a framework for assisting institutions to assess the quality of degrees or portions of degree programs. In these projects, the DQP was used to review and revise learning outcomes, map curriculum, align assignments, revise general education, develop new

programs, address issues of transfer, and explore alignment of learning outcomes with external expectations. It provided a mechanism by which faculty, staff, administrators, and students could engage in conversations around the “how” of education and explore issues of educational design. The work led to the development of an assignment library and NILOA staff facilitating assignment charrettes, where groups of faculty came together for an intense period of collaborative assignment revision and review (Hutchings, Jankowski, & Ewell, 2014).

Tuning predates DQP by just more than a year. As with DQP, its emergence derives from concerns over establishing the quality of degrees in light of commitments by both Lumina Foundation and the Obama administration to increase degree attainment in the United States. Quality emerged as a central concern. Seeking a means of encouraging quality of US degrees, Lumina Foundation commissioned Cliff Adelman (2009) to make a study of Tuning, a process developed by European faculty in response to the Bologna Process, which resulted in the European Higher Education Area. As a process, Tuning asks faculty to define the essential learning within specific disciplines through collaborative processes. In Europe, it enabled the definition of learning that could form the basis of comparability across borders so that students moving from one national system to another would be prepared, regardless of where they had studied prior. In the US, it has been undertaken for a variety of different purposes.

As a process, Tuning in the American context consists of five constituent elements. In Tuning, discipline-specific faculty 1) define learning essential to a discipline in the form of core competencies and learning outcomes; 2) map career pathways; 3) consult stakeholders, including colleagues, institution staff, students, and employer groups; 4) revise the competencies and outcomes in light of consultation and reflection; and 5) implement the results of this preceding elements at a local level. In practice, these five elements rarely took the form of a step-by-step

process (Marshall & Vaughan, 2017a). Groups using Tuning were more likely to work in multiple areas simultaneously, and doubling back through some as need arose. Local implementation, for example, did not necessarily constitute the fulfillment of Tuning. Rather, faculty would at times incorporate work into local practice along the way or bring local examples to the larger group as a form of input. In short, no two Tuning projects have looked exactly alike. In different contexts, Tuning was used to tackle different concerns. What remains consistent is that Tuning results in a set of competencies and outcomes that function as a discipline-specific document akin to DQP, with learning typically described at the associate, baccalaureate, and master's levels, specific to a major. Norm Jones (2012) writes that while Tuning is a faculty-led approach, it also involves seeking input from students and employers in the process of developing a shared understanding of what students should know, understand, and be able to do when they finish a disciplinary degree program. He stresses though that Tuning necessarily requires conversations that include many institutions, allowing disciplines space to think as a discipline, rather than be subject to local pressures of specific departments.

The impact of Tuning surfaces in several key areas (Marshall & Vaughn, 2017b). First, faculty begin to think more holistically about the shape of their disciplines, shifting thinking away from just content knowledge to include the epistemologies employed by the discipline as objects of learning. This, in turn, impacts their considerations of curriculum and assignment design. Second, faculty have started to consider the degree to which foundational classes make distinct contributions to general education and, conversely, how courses in majors leverage and develop the learning students begin to attain in general education. The result is a more integrative picture of students' learning experiences. Third, faculty undertake efforts to explicitly help students consider the ways in which disciplinary study equips them to transition into a variety of

post-graduate contexts, whether graduate training, civic engagement, or, perhaps most common, employment. Finally, faculty develop greater awareness of how colleagues in other institution types approach educating students, with the result being a deepening of respect for those colleagues, particularly at community colleges.

Having established through Adelman's work the potential of Tuning to provide clear definitions of learning, Lumina Foundation launched three pilot projects, each working on a state level. In 2009, Indiana, Minnesota, and Utah each undertook to "tune" disciplines within their state systems, drawing together faculty in two to three disciplines from both two- and four-year institutions. Transfer tended to be the impetus of these projects for states, and Tuning was subsequently undertaken by Texas and Kentucky for similar reasons. In an experiment in scale, the Midwest Higher Education Compact (MHEC) then engaged in a multi-state project that pulled together Indiana, Illinois, and Missouri to examine the impact of "tuning" across state lines. MHEC's motivation, similar to the five state-based projects, was to explore outcomes-based transfer of students from state to state.

Tuning then underwent two national-scale experiments, each exploring different facets of the process. The American Historical Association (AHA) determined to use Tuning as a means of establishing essential learning within the discipline of history. Beginning with a small core group who drafted the initial learning competencies and outcomes, AHA convened a larger group of seventy, who reviewed the initial documents and made recommendations for revision as they committed to making trials of the outcomes and consulting with stakeholders locally. AHA demonstrated the pronounced impact of engaging in Tuning at this scale in that it motivated faculty to develop reflection and conversations around how best to educate students in the discipline. Following AHA, the National Communication Association took up a Tuning project

in which they attempted to test the use of DQP within Tuning work. That initiative has seen success equally dramatic as that of AHA, and in the midst, we have developed fuller understanding about the ways in which Tuning and DQP work synergistically as tools for rethinking how disciplinary faculty can best foster students' learning.

While reports on the impact of the DQP pilot projects were undertaken (see Jankowski & Giffin, 2016a) and documents developed to help support institutional use of the DQP were developed (see Jankowski & Marshall, 2014 and Jankowski & Giffin, 2016b), we noticed a different shift occurring as those within institutions worked with both DQP and Tuning. It is this shift that serves as the focus of this book. While we use the DQP and Tuning as examples of the tools that help facilitate conversations and the paradigmatic shift we argue for in the book, they are two tools of many. We use the lessons learned and examples from our work with DQP and Tuning to provide a framing of the larger argument, but one thing is very clear, there are multiple approaches that are coming into alignment that support the work this book details. There is movement in the field.

OUTLINE OF THE ARGUMENT

We begin in chapter one by considering what has become an exceptionally crowded terrain in the reform of higher education. With the proliferation of initiatives, local, regional, and national, many organizations have sponsored efforts to strengthen student learning in colleges and universities. Yet, most are attempting to solve related issues and are actually connected in nature. The chapter serves to provide a means to understand the different initiatives that align with and connect to the work being done in institutions in order to focus upon meaningful engagement with assessment and clearly document student learning. Once the connected nature of the various initiatives has been laid, we explore the emergence of an alternative paradigm which we term the

Learning Systems Paradigm. Providing a theory of change and a framework for understanding faculty work, we outline the elements of the paradigm and expand upon Barr and Tagg's (1995) efforts to move institutions from an instruction to a learning paradigm. The Learning System Paradigm presented in chapter two includes four key elements—consensus, alignment, student-centeredness, and communication. Chapter three focuses upon developing a theoretical foundation for alignment, a word too often tossed around without full consideration of possible meaning and implications. We present a definition of alignment, beyond that of Biggs (1996) focus of constructive alignment at the course-level. Instead we suggest a far more encompassing notion of alignment, arguing for a definition that requires rethinking the structures that have siloed elements of the higher education landscape. By thinking more holistically, faculty, staff, and administrators can reshape institutional practice in ways that create synergistic, integrative learning in students.

With our Learning Systems Paradigm in place and alignment defined, chapters four and five turn to practice. In chapter four, we explore the application of the paradigm to the work of curriculum mapping, presenting alternative ways to map and outline the means by which mapping can support a collaborative process of sense-making. We argue that mapping is a way of seeing and as such, a way of not seeing other areas that support student learning, unless done in a mindful, collaborative manner. In chapter five we examine the work of faculty to better align their assignments to assure demonstration of student learning via embedded course-based assessments. The implications of the paradigm for assessment are explored and we apply the paradigm framework to the work of assignment design and alignment. Yet, we would be remiss to not examine barriers to moving the work forward or engaging in collaborative reflection on educational design for student learning. When we are on different college campuses or doing

presentations at conferences, we routinely are asked how to get the work started or how to support the approaches we outline. It is for this reason that chapter six focuses upon barriers to the work and presents ways to start, options for moving around barriers, or conceptualizing the barriers in relation to our foundational discussions of initiative connections and paradigm shifts.

In our final chapter, we pursue the implications of our argument. First and foremost, given the declining confidence in higher education, how do institutions talk about what they have done and are doing? The accountability concerns, we argue, have to do, in part, with the struggles of institutions to describe what they do to encourage student learning. The concluding chapter takes up this focus, offering strategies for communicating the impact of alignment on student learning.