DQP

# ROADMAP TO ENHANCED STUDENT LEARNING

## Implementing the DQP and Tuning

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National Institute for Learning Outcomes Assessment
Making Learning Outcomes Usable & Transparent

IEBC
INSTITUTE for EVIDENCE-BASED CHANGE

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# Roadmap to Enhanced Student Learning: Implementing the DQP and Tuning

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## Introduction

The Degree Qualifications Profile (DQP) was introduced in 2011 to provide a baseline set of reference points for what students should know and be able to do to merit the award of associate's, bachelor's, and master's degrees—regardless of their field of study. Tuning, introduced nationally in 2009, is a process by which faculty in different fields of study determine discipline-specific desired learning outcomes for their subject area through consultations with one another, colleagues on other campuses, students, alumni, and employers. Tuning has been undertaken at state and national levels, while DQP work has unfolded within individual institutions and across institutional partnerships.

*For both the Degree Qualifications Profile (DQP) and Tuning, the primary reference point is the student, not the institution.*

The Institute for Evidence-Based Change (IEBC) and the National Institute for Learning Outcomes Assessment (NILOA) have been facilitating and tracking institutional use of these resources over the past several years. This roadmap of that work draws on what our colleagues and we have learned through focus groups, case studies, interviews, institutional reports, surveys, and observations of institutional work about the various pathways institutions have followed in applying the DQP and Tuning. Rather than a "how-to" manual, this document explains many of the routes institutions have taken in using the DQP and Tuning to advance student learning. This is of importance as the DQP has been used as a national conversation starter—a tool for institutions to comment upon and use to reflect on the meaning of a degree through a process infused with Tuning principles. As a faculty member involved in a DQP project stated, "The DQP is the most useful tool I have encountered which helps guide faculty through the student experience." Neither are frameworks for direct adoption, instead they are tools to help institutions reflect on why they are doing what they are doing to help students succeed.

To do this we begin with a discussion of the principles shared by DQP and Tuning efforts, then, we present approaches institutions have used in these efforts, and, finally, we explore sustaining efforts moving forward.

## Guiding Principles

For both the DQP and Tuning, the primary reference point is the student, not the institution. According to its authors, the DQP focuses on the degree—with faculty from different fields determining the disciplinary picture with field-based expectations of every student (Schneider, Gaston, Adelman, & Ewell, 2014). Thus, the DQP's expected proficiencies align with the associate, baccalaureate, or master's degree, regardless of field of specialization. Tuning allows faculty to set forth the disciplinary expectations for students pursuing a degree in a specific field. Within institutions and across institutions, faculty customize both approaches by focusing on action verbs, specifying at different educational

attainment levels what students are expected to know and do. Yet, in each approach, what is developed is an outline, or a profile—as neither the DQP nor Tuning specifies what to teach or how to deliver the content within a given course or program. Further, it doesn't limit learning to that which occurs in courses. Instead, each requires more than completion of a course as a proxy for learning by asking for demonstrations of students' progress toward agreed-upon knowledge and skills over the entirety of their educational journey (Ewell, 2013). Neither is about standardization but, rather, about establishing the quality and relevance of degrees as a whole and within various academic disciplines.

DQP and Tuning are both grounded in five broad principles consistent with their core assumption—that every student must attain faculty-vetted levels of proficiencies. We open this roadmap with a discussion of the principles that tie these initiatives together because, while they have different histories of involvement and introduction in higher education, they are intricately coupled. Colleges and universities involved in DQP efforts have not necessarily been involved in a statewide or national Tuning effort, and yet in their DQP work these institutions have undertaken an approach akin to Tuning. While initially separate from DQP activities, Tuning has engaged faculty in broader conversations of degrees and where learning occurs beyond the discipline—outlining what is supportive and what different departments provide. Thus, institutions and faculty involved in either effort have worked through similar processes, and engaged in similar considerations and discussions. One cannot use the DQP without tuning and one cannot engage in Tuning without considering degrees. The shared principles of the DQP and Tuning provide the lens through which to view the connections between these approaches. Their related processes and elements are outlined in the remainder of the roadmap. The principles shared by the DQP and Tuning are not mutually exclusive and there is overlap and support between them, but for our purposes in this roadmap we have outlined six principles:

Coherent, intentional pathways for learning;

Sequenced, integrated learning experiences focused on the transfer of knowledge and skills;

Transparency and portability of learning;

Quality assurance of educational degrees and programs;

Inclusion and equity; and

Collaboration

***One cannot use the DQP without tuning and one cannot engage in Tuning without considering degrees. The shared principles of the DQP and Tuning provide the lens through which to view the connections between these approaches.***

**Coherent, Intentional Pathways**

The DQP and Tuning reflect the general shift in the focus of higher education from teaching to learning (Barr & Tagg, 1995). This means that what students know and can do is central and that the role of faculty and others throughout the institution is to design and provide learning experiences to help students acquire and demonstrate the intended proficiencies. Creating coherent pathways involves discussion across levels to craft curriculum and learning experiences so that they hold together over time and so that students who attend multiple institutions and accumulate learning across different learning environments are able to combine their varied experiences into a coherent whole. Institutions that participated in the DQP project of the Southern Association of Schools and Colleges (SACS) found that the work generated a holistic view of the

curriculum, leading to an "awareness of the importance of the core program of General Education to the success of degree program offerings" (Reed, 2013, p. 13). Elsewhere, institutions in the Higher Learning Commission's DQP pilot project reported a renewed institutional self-awareness of academic values and the importance of backwards-designing an intentional educational curriculum from the proficiency statements. Institutions in the Indiana Tuning group reported they were very deliberate in building associate's degree competencies as a foundation for bachelor's degree competencies through considering the bridges between these levels. Faculty claimed that their discussions across campuses led to awareness of the linkages between the levels, leading to larger conversations of how they fit together and how to outline clear pathways for students between degree levels. Developing clear, coherent, intentional pathways toward transparent desired learning outcomes not only allows students to better navigate the educational experience but also helps them to understand the relevance and importance of various elements of that experience.

***The DQP proficiencies are framed at three degree levels—associate's, bachelor's, and master's. Tuning efforts also must consider levels of student learning.***

**Sequenced, Integrated Learning**

The DQP proficiencies are framed at three degree levels—associate's, bachelor's, and master's. Tuning efforts also must consider levels of student learning. At some point, preferably sooner rather than later, discussions in both must turn to the most effective way to sequence and integrate students' learning experiences within and between individual courses and across educational levels. The final report from Texas's Tuning of Civil Engineering (2011) discussed how Tuning provides levels of developmental expectations—from the beginning of pre-professional study to professional study to practice—by seeking input from various stakeholders so as to establish a clear picture of what is expected and how to efficiently plan educational experiences to achieve those expectations. Both the DQP and Tuning address issues of applied and integrated learning. In other words, "applied" refers to a capacity to think nimbly and use learning from one area in another. The pedagogical challenge here is not how to train students but how to help students develop awareness of the ways their knowledge can be utilized. The backwards-design approach to scaffolded learning—learning that builds on prior learning over time by reinforcing and requiring students to apply and integrate what they learn—is integral to both Tuning and DQP efforts. A professor of history in Utah who had participated in the state's Tuning initiative asked students in the senior capstone class to reflect on the knowledge gained as a history major and explain how it could be used outside the field. Subsequently, when a graduate—a former student of that professor—was told in a job interview that a degree in history likely did not give her the skills for a position at an archive, she explained how her study of history had imparted valuable skills and knowledge that could benefit the archive. She got the job. The point here is that study in the discipline was not diluted or vocationalized; rather, the professor helped students develop an appreciation for the broader applicability of what the discipline taught—thus integrating and applying learning throughout the course of a degree program.

**Transparency and Portability**

Identifying and explicating desired learning outcomes encourages students to become self-aware learners. Since the 1970s, a plethora of research has demonstrated that metacognition is an important contributing factor for

successful learning (Hacker, Dunlosky, & Graesser, 1998). When articulated clearly and consistently, learning outcomes can help deepen learning by helping students identify and focus on the kinds of knowledge and ability that course requirements, classroom activities, and other meaningfully crafted learning experiences are designed to foster. Minnesota wrote that their experience with Tuning led to increased clarity of communication to students regarding what knowledge and skills were expected for demonstration within the discipline and which would be used in future careers (Minnesota Office of Higher Education, 2010). The Indiana Tuning project stated that while some institutions had institution-level learning outcomes, prior to involvement in Tuning they were rarely publicized, rarely addressed at more than one degree level, rarely clearly defined, and never discussed across institutional boundaries (Indiana Commission for Higher Education, 2010). Institutions using the DQP found that, through faculty discussions, what the degree represents and means has become clear to faculty and to students regarding what proficiencies students should meet, what needs to be done to get there, and how students will know they have attained them. Further, involvement in the DQP and Tuning efforts have led to transfer agreements between institutions, such as those in Texas and in the Quality Collaboratives of the Association of American Colleges and Universities (AAC&U)—which have the potential to improve transferability and increase student success. Moreover, institutions hope that having clear, transparent pathways for students focused on shared proficiencies and outcomes will help reduce cost for students while having a significant effect on completion rates (Texas Higher Education Coordinating Board, 2011). Further, transparency of proficiencies supports families and others in terms of understanding what a degree means and helps to show the connections between outcomes and courses. The idea behind transparency and portability is that if students are aware of the proficiencies they are striving to achieve, understand and can navigate the educational system to achieve those proficiencies by understanding how different learning experiences fit together and support or reinforce each other, they are better positioned to take that learning with them and to explain to others what they have learned and are able to do.

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**Quality Assurance**

How to acquire evidence about what students know and can do with their learning is the crucial question for a college or university that seeks to provide a high quality education and it is a question that higher education itself needs to answer. Institutions engaged with DQP and Tuning efforts have stated that they are able to make more intentional decisions about what to do for students and how best to do it, prompting a culture shift toward considering teaching and learning in different and invigorating ways. In addition, colleges and universities have used the DQP as a framework to guide the collection of evidence of student accomplishment at the program and institution levels (Rogers, Holloway, & Priddy, 2014). In some ways, engagement with the DQP and Tuning invokes an educational perspective that includes assumptions about how students learn, what assessing that learning over time can do, and how focusing on students' learning can enhance the quality of individual student learning. As stated by Susan Ambrose, Michael Bridges, Michele DiPietro, Marsha Lovett, and Marie Norman (2010),

1. Learning is a *process,* not a product. However, because this process takes place in the mind, we can only infer that it has occurred from students' products or performances.

2. Learning involves *change* in knowledge, beliefs, behaviors, or attitudes. This change unfolds over time; it is not fleeting but rather has a lasting impact on how students think and act.

3. Learning is not something done *to* students, but rather something students themselves do. It is the direct result of how students interpret and respond to their *experiences* (p. 3)

Thus, DQP and Tuning efforts allow institutions and those within them to refocus conversations on assessment of student learning in ways they couldn't before, by creating agreement on proficiencies and student paths through varied educational systems.

***A focus on ensuring the learning of every student is embodied within the DQP and Tuning processes, thus providing a means to move higher education further towards inclusion and equity.***

**Inclusion and Equity**

Lumina Foundation's equity agenda states that disparities exist across various student groups and that intentional and focused efforts are needed to address these gaps. A possible avenue to enhance postsecondary attainment for student groups is through outlining how their current learning is applicable in future careers, why they are required to take certain courses, what they are being asked to do, and how they can contribute to and navigate the educational system—all elements that emerge in DQP and Tuning work. The DQP and Tuning provide venues to help students take charge of their own learning and move more efficaciously through educational institutions. Used in tandem, they allow personnel within the university to recognize and value co-dependence regarding how the various components of the educational system come together to support students and their learning. For instance, institutions that participated in the Minnesota Tuning project wrote about the value of cross institution discussions to see how they are similar in various ways and share the same goals for students. Faculty participants were able to learn about new approaches to shared challenges and to better understand the students they each served. Institutions that have used the DQP to examine general education discuss how they are able to outline coherent, sequenced, intentional programs of study for students by pointing out the connections between the different elements of the curriculum as opposed to providing students with lists of possible courses without clear explication of how the courses could support or enhance degree programs. As a DQP faculty participant stated, "the DQP is a tool to help groups of faculty who teach in disparate disciplines see commonalities in what they are teaching and to create a coherent, cohesive curriculum that is more than a series of discrete courses in a select discipline." Finally, DQP and Tuning focuses on every student with the emphasis on ensuring that every student who graduates can demonstrate the requisite proficiencies. A focus on ensuring the learning of every student is embodied within the DQP and Tuning processes, thus providing a means to move higher education further towards inclusion and equity.

**Collaboration**

Finally, collaboration stands as an essential tenet of work with the DQP and Tuning. On its surface collaboration may seem a simple working principle,

and the Roadmap will underscore the importance of working collaboratively to advance learning in higher education. Collaboration drives further than that. With students becoming ever more mobile in an educational environment offering more and more options, efforts to deepen student learning and success depend on cooperative efforts not just in and across institutions, but also among them and other partners such as employers, business organizations, states, community stakeholders, alumni, disciplinary and professional associations, and accreditors. Truly collaborative work between two- and four-year institutions has been rare in the American higher education landscape, with transfer and articulation agreements often shrouded in uncertainty. DQP and Tuning stand as resources for supporting more collaborative work, both within and among institutions of higher education, such as the work undertaken by the AAC&U Quality Collaboratives two- and four-year institution partners. Without the collaboration they promote, attempts to develop student learning risk being fragmented and misaligned. An emphasis on collaborative solutions recognizes that multiple institutions share many of the same students, sometimes simultaneously, and therefore share responsibility for promoting their success. The DQP work of the Council of Independent Colleges was grounded in the principle of collaboration through creating a consortium approach for institutional work with the DQP. Collaborating with multiple partners within and across institutions allows for cohesiveness of the larger educational landscape through which students traverse.

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## Elements and Processes in Implementing DQP and Tuning

This section outlines the various elements of using and implementing the DQP and Tuning. Drawing on interviews and institutional reports, our collective experience suggests there is not one best way to use the DQP or to tune a degree program; rather, there are multiple elements that can be combined in different ways. Thus, each process, explained below, provides a different lens or way to think about this work and comes from the field—from institutions and departments that have participated in and undertaken DQP and Tuning work. Institutions may enter or exit these processes at various stages, much as you might enter and exit a roadway. Included among these explanations are institutional examples, lessons learned, and additional resources and templates for the following elements and processes:

Institutional readiness for the work,

Review and alignment of learning outcomes, and

Assessment of student learning.

### Institutional Readiness

Institutions working with the DQP and Tuning used different approaches and reported different uses. Gauging institutional readiness is a way to make sure the work ties to and integrates with existing institutional priorities, such as those contained in the current strategic plan, and merges with important ongoing efforts, such as general education reform, curriculum modification and review, or program development—so as not to exacerbate the perception that DQP and Tuning are additional work for faculty and staff, unconnected to their core functions.

*What is the value and purpose?*

The DQP and Tuning are intended to help faculty and others systematically take stock of the means and ends of their students' learning experiences, as students acquire what are considered to be necessary proficiencies throughout their studies. Their flexibility makes them suitable for use in any number of ways and for the variety of needs that particular institutional and organizational contexts might demand. Moreover, applying the DQP and Tuning to particular campus needs and questions can induce synergy that advances work underway and ameliorate the so-called "initiative fatigue" that can discourage faculty and impede progress (Kuh & Hutchings, forthcoming).

How the DQP and Tuning are introduced and framed depends on the particular needs of the institution and goals for the work within a given organizational context. Often, the DQP and Tuning are used to address ongoing concerns or as tools for advancing existing projects—in other words they are linked to ongoing efforts occurring within the institution. For example, the University System of Georgia had already begun work on developing a core curriculum and strengthening completion through transfer. The DQP and Tuning were helpful in addressing those priorities and provided the campuses with resources and strategies for advancing those goals. Georgia State University (GSU) and Georgia Perimeter College (GPC) collaborated to test the extent to which the DQP and Tuning could help strengthen degree outcomes, assess students attainment of learning outcomes in various majors, and facilitate transfer from GPC to GSU as part of a system-wide effort to construct a revised core curriculum and improve completion rates by focusing on transfer students (Kinzie, 2014).

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In other cases, the DQP and Tuning can prompt new work or next-step activities to support or build upon previous efforts. For example, Point Loma Nazarene University (PLNU) took up the DQP to strengthen assessment of general education (Hutchings, 2014a). Having already developed strong student learning assessment systems, PLNU found that the DQP could help in reducing the segregation of general education and majors through developing an integrative experience for students. The result was the development of senior capstone courses that provided an integrative component to PLNU's already strong assessment efforts.

At Kansas City Kansas Community College (KCKCC), Dean of Institutional Services Sangki Min noted that assessment activities there were "dragging" (Hutchings, 2014b). The campus used the DQP to refine learning outcomes and assess them in ways drawing directly on classroom work. In this case, the DQP stimulated discussion and exploration of how learning outcomes assessment might be reinvigorated. Those efforts were responsive to reaccreditation expectations while also yielding a home-grown data management system to support authentic assessment of learning.

While campus context matters, it is important that DQP and Tuning efforts focus on strengthening student learning and success, whether they be driven by improving assessment of learning, defining outcomes, improving transfer, or integrating general education and majors—an area of much use of the DQP. Within that framework, members of the campus community or organization will likely benefit from having an opportunity to review or discuss the DQP and Tuning, the assumptions that undergird them, and their potential impact on

the particular needs identified by campus leaders for their use. Institutions have used various strategies for doing this. For instance, KCKCC oriented faculty to the DQP by asking them to bring course syllabi, the outcomes on which they mapped to general education outcomes that drew on the DQP. Other campuses have led the work with a focus on student learning with the DQP and Tuning as guiding documents and processes in the background, still others have engaged with a clear focus on DQP or Tuning, and others have brought them into the conversation later. In each instance, there is no right or wrong way to do DQP or Tuning, it has depended on the task at hand, the approach undertaken, and who is involved in the work within the institution.

*Who should be involved?*

Once a clear purpose for undertaking DQP or Tuning activities is established, institutions should consider whom to involve in the work, their respective roles and responsibilities, and how to share information throughout the institution. Because DQP and Tuning work requires collaboration, emphasizing broad participation is wise. As a result, who leads and how they lead are both important. Again, although the specific players will vary depending on contextual matters, one can anticipate presidents, provosts, and vice presidents to be involved, as discussed later. If a university unit such as a school or college, division, or a single department undertakes the work, senior administrators may not be directly involved, but their public endorsement of the work is always welcome. Even with campus-level administrative support, faculty and staff buy-in is essential, as they may modify the curriculum to attain the desired ends.

Broad participation encourages the cultivation of a critical mass of interested and invested parties—which builds collaborative energy. Without critical mass and collaboration, revisions of existing outcomes, curricula, or assessment strategies can be slow—if ever—to positively impact campus policies and practices. Reviewing reports from institutions that have used the DQP or have done something akin to Tuning highlights the importance of forming working groups or committees that provide leadership capable of generating broad participation—sometimes called "distributed leadership." For example, Marshall University formed a Syllabus Task Force and a Core Domains Workgroup to facilitate work in two of its three areas of focus, while other institutions created DQP focused task forces.

Creating new committees is not essential, however. Almost all institutions have existing mechanisms to address outcomes assessment, general education, curricular requirements, community outreach, and faculty and staff development. Quite often, it is one or more of these existing committees that are responsible for areas relevant to DQP or Tuning projects. California State University East Bay's faculty senate led the initiative to create institution-level learning outcomes. McKendree University combined its assessment, general education, and faculty development committees into a new committee that takes a more integrated approach to all three areas.

The core of DQP/Tuning leadership groups should be faculty, given that the DQP and Tuning are about the identification, definition, and assessment of learning—all core responsibilities of the faculty. Having faculty champions who lead the work and pass on shared learnings and knowledge from their experience to other faculty is crucial to advancement and sustainability of efforts.

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Acknowledging the importance of faculty leadership does not relegate other campus constituencies to trivial roles. DQP/Tuning work can and often should involve many at an institution such as student affairs professionals, information technology specialists, and others. Indeed, pioneering DQP schools have included in their DQP-related processes institutional research staff, students, employers, library staff, career counselors, assessment professionals, and finance staff, to name a few. When undertaking DQP and Tuning work, it is useful to begin by asking who is sitting at the table, who isn't, and why or why not? Below are additional constituencies to consider involving:

***DQP/Tuning work can and often should involve many at an institution such as student affairs professionals, information technology specialists, and others.***

- **Contingent faculty,** according to the American Association of University Professors, make up more than 50% of classroom faculty, many teaching full course loads despite their frequent "part-time" status and having more students than full-time and tenure-line faculty. As an integral component of campus communities, contingent faculty are an important group to include in work with the DQP and Tuning.

- **Teaching and learning center staff** provide professional development activities for faculty and staff involved in instruction. Faculty staffing these offices or who are a part of the teaching committees that sometimes find their homes in teaching resource centers often have expertise that can benefit discussions of outcomes, alignment, and curricular changes—making them tremendous resources for supporting those efforts.

- **Librarians** have gained a great deal of attention as digital technologies increasingly highlight the need for information literacy. The DQP's "Use of Information Resources" proficiencies points to the way that information literacy cuts across disciplines as a key area of knowledge and skill in higher education. Given this context, librarians—particularly those responsible for developing educational programming or for partnering with faculty to do so—can be helpful in developing outcomes, assignments, and rubrics for information literacy in ways that integrate these proficiencies into curricula.

- **Academic advisors** can contribute to work inspired by the DQP and Tuning in several ways. First, they often have a clear understanding of how students move through curricula. Second, advisors often hear first hand students' concerns and frustrations with curricular structures and support programs, which equips them to help faculty identify causes for course-taking patterns and, potentially, student performance. Finally, as staff responsible for assisting students in making decisions about their educational pathways, advisors help students navigate through an institution.

- **Career resource center staff** help students connect with employers. As the office responsible for supporting students' transition into the work force, staff in career resource centers are positioned to convene focus groups with local employers or distribute surveys to them. In addition, they are often able to support faculty efforts to reflect on how knowledge, skills, and abilities translate to careers and how to communicate that information to students.

- **Offices of community engagement personnel**, like their counterparts in career resource centers, can support efforts to reach out to community stakeholders, in particular local governments and nonprofit organizations.

Doing so allows external input to contextualize discussions of student learning. More importantly, given the DQP's attention to "Civic and Global Learning," offices of community engagement can collaborate with faculty and staff on developing opportunities for students to participate in service-learning programs that support both civic and applied learning.

• **Student organization advisors** of student governments, honor societies, clubs, civic groups, and Greek organizations work directly with students. Productive use of the DQP or Tuning might include mapping outcomes to co-curricular and extracurricular activities to identify the extent to which they contribute to or reinforce learning described in the DQP, tuned discipline outcomes, or campus-specific descriptions of learning. Student organizations can also serve as venues for focus groups that capture information about students' experience of curricula, course designs, and assignments.

• **Employers** can help create opportunities for students to transfer their learning to concrete situations. The goal is not necessarily to train students for specific jobs but to help them understand how their education provides them knowledge that translates to a variety of potential careers. Doing so can prompt institutions to better understand the demands students will face so that they can help students recognize that what is (already) taught applies elsewhere, as well as provide students with vocabulary and reference points to communicate with employers about what they have learned.

***DQP and Tuning focus attention on matters of student-learning, which cuts across curricula and co-curricula, but they touch those different aspects of post-secondary education to different degrees.***

While, as indicated above each of these constituent groups may have roles to play in work with DQP and Tuning, the nature of those roles will necessarily differ. DQP and Tuning focus attention on matters of student-learning, which cuts across curricula and co-curricula, but they touch those different aspects of post-secondary education to different degrees. Curricula are the core elements of colleges and universities, and so work with DQP and Tuning tends to focus on identifying the learning outcomes that undergird curricula. As a result, faculty are the primary drivers of Tuning and DQP projects and faculty assume primary responsibility for them. Other constituent groups may be involved or not, depending on the goals established by an institution or organization, but faculty will be a constant.

*How should we introduce and facilitate communication?*

When thinking about how to facilitate and reinforce the use of DQP/Tuning, it is also useful to ponder how the effort will be introduced to the campus community. Will it be introduced by faculty? By an executive leadership council? By a team representing members of each? Will it be presented as a tool that can be commented on and changed, or as something to be adopted? In this, as with other elements of institutional readiness, the best approach will depend on what the institution is trying to accomplish as well as the institution's history and culture, governance structure, mission, and student population. As outlined in the SACS report on use of DQP with Historically Black Colleges and Universities (Reed, 2013), different approaches were employed by the institutions to launch the DQP including both top-down and bottom-up efforts But there was "no consensus that either approach was better or worse in accomplishing the task" (p. 25). The Kentucky Council on Postsecondary Education has participated

**Student Involvement**

Students are the focus of colleges and universities, and so their involvement in DQP and Tuning projects makes sense, but there is often uncertainty about what role students might play. Several forms of participation are possible, both direct and indirect. As with engaging any "stakeholder," there needs to be a reason. This has particular bearing on engaging undergraduate students, since, as students early in their educational careers, they lack a clear picture of the trajectory and shape of college and university education. Nevertheless, undergraduates can provide valuable input about the degree to which they understand expectations for learning or the alignment of outcomes to the curricula by which they attain them. If encouraged to be reflective about their educational experience, their understanding of how they are being challenged to learn can help faculty to identify how students experience programs, so that they can better address the kinds of learning captured in defined outcomes. Institutions might employ surveys of students or even focus groups to gather such information. This involvement of undergraduate students contributes to work with DQP and Tuning indirectly, but no less importantly for being so.

Graduate students might be engaged in similar ways, though their own completion of undergraduate education positions them to participate more directly, perhaps, in definitions of learning or consideration of pedagogies that support student learning. Graduate students are in a particularly good position to help faculty consider the degree to which learning outcomes for undergraduate programs prepare students for advanced study. By reflecting on their own transitions, they can identify what gaps they found in their own training and help faculty to develop more explicitly aligned outcomes. For those graduate students aspiring to their own faculty careers, the experience of working on DQP and Tuning projects can help to professionalize them and advance the learning-centered philosophy of higher education that both DQP and Tuning encourage.

Alumni are a student group who can speak to multiple issues that arise in DQP and Tuning initiatives. As recent graduates, they can help institutions by reflecting on the degree to which their own educational experiences were coherent and the degree to which those experiences prepared them to enter the work force. As employees, alumni can help faculty better understand the types of demands placed on them by employers as well as the ways in which they utilize their education in their jobs. That information can, again, be gathered by surveys or focus groups, though, as with employers, focus groups typically gather more meaningful input.

in both Tuning and DQP work through the AAC&U Quality Collaboratives projects, but they were not exclusively focused on the DQP; in fact, the language of DQP was not used. Conversations began, rather, with discussing student work and what faculty members wanted to see in student work, leading naturally to discussions of assessment and pedagogy. Still, in other instances such as several of the Higher Learning Commission (HLC) participating institutions, academic leadership gave the DQP to faculty teams for their review and commentary—thus, faculty were given an opportunity to review the fit of the DQP as a tool for the proposed work.

Because both Tuning and DQP are faculty-led processes, ample time and space are needed for faculty to think deeply about new teaching and learning approaches and appropriate outcomes assessment. The Tuning Indiana project did exactly this to make it possible for faculty to vent, re-evaluate, discuss, and examine different ideas that would strengthen student learning. Additional institutional readiness factors to consider are the effectiveness of the formal communication

**Employer Involvement**

Working with employers can take a variety of forms. In both Kentucky and Texas, Tuning initiatives used surveys of employers to rank the degree to which particular transferable skills were deemed important, and that information was included in discussion of competencies and outcomes. In Utah, the state's Tuning project convened focus groups that included not just representatives from myriad regional employers but also from the Chamber of Commerce. North Dakota State College of Science, in collaboration with Alexandria Technical and Community College, held an all-day focus group with employers that examined alignment of employer expectations with the DQP. Focus groups yielded insights into the kinds of abilities and skills employers value most in their new employees, including the proficiencies identified by the DQP, and the varying levels of proficiencies required by industry segment. Faculty then discussed the ways in which the outcomes they had identified for their fields addressed the proficiencies.

A Tuning participant explained that she frequently heard that employers wanted employees with strong communication skills. But, she asked, just what do employers mean by "strong communication skills?" Communication can be strong or weak in different ways, depending on particular contexts. Might employers have something to learn, she asked, from faculty about how to define what they mean by such descriptors? Doing so might equip employers to work with new hires to identify contextually specific expectations so that students can translate what they have learned to the new setting. Connecting with employers can help build relationships in which employers gain insights into what outcomes mean in ways that better equip them to transition their new hires into the workforce.

system and how academic leadership can create and provide supportive space for conversations to unfold. As an academic leader stressed when discussing her campus's involvement with the DQP, her role as an administrator was to be confident in the faculty, to create space and time along with needed supports for them to reflect, discuss, and develop a meaningful approach to student learning across the campus. Her role was not to lead the work but instead to support the process as a priority for the institution, to reward involvement, and allow the faculty to re-envision the curriculum.

The SACS DQP project utilized webinars, team meetings, trainings, and faculty retreats; the HLC DQP project employed an online collaboration process whereby participating institutions were able to share and upload documents and post questions; Tuning in Texas involved face-to-face meetings and webcam technology; and, after discipline team meetings with faculty members, Minnesota's Tuning project held a statewide conference for sharing with the broader disciplinary community. Collaboration and discussions between two-year and four-year institutions have been valuable, with Tuning participants reporting that "faculty were eager and willing to talk to peers about student learning and opportunities for improvements" (Minnesota Office of Higher Education, 2010). DQP institutions where collaboration was strong were able to streamline transfer pathways for students based on faculty observations of students' educational experiences.

Focused conversations about how students are learning and how curricular strategies contribute to the desired outcomes can help to cultivate a shared investment in enhancing student accomplishment that the DQP and Tuning require. The best work in this area is usually iterative, unfolding over time

and responding to changes in the external and internal environments. That is why establishing a strong campus-wide communication system that draws related committees and groups together helps militate against faculty remaining ensconced in their silos. (Appendix A contains resources to accompany this roadmap on change management and communication systems.)

In short, institutions pondering using the DQP or Tuning should be clear about the value and the purpose of the work. Why *these* tools and why *now*? What is the benefit of utilizing them at this moment for our students? Who will be involved and how will we communicate with them and others about the work? Outlining various constituents to involve (as well as their roles), delineating communication channels, and defining a plan for introducing the work to the campus community are matters that need to be considered prior to institutional or departmental use of the DQP and Tuning.

**Review and Alignment of Learning Outcomes**

Both the DQP and Tuning encourage systematic reflection on the kinds of learning (knowledge, skills, and abilities) colleges and universities expect of their students. Institutions express their desired learning outcomes at the institution-, program-, and course-level. Collectively, these goals provide a framework for determining whether students are attaining core proficiencies at the intended points in the relevant degree program—a task that requires coordinated effort on the part of different units on campus. Thus, clear and comprehensible outcomes are critical for faculty and staff to conduct a comprehensive review of the expected proficiencies at various levels and align these outcomes across each.

The vast majority of colleges and universities have established a set of outcomes for all their students (Kuh, Jankowski, Ikenberry, & Kinzie, 2014). But for understandable reasons such as lack of faculty and staff preparation for outcomes-based course design and assessment and rushed processes to comply with accreditation expectations, the outcomes that exist in many cases are inadequately described and poorly aligned. For information on writing clear learning outcomes statements, see Appendix B or information here: http://www.league.org/gettingresults/web/module2/learning/

Even when an institution has clear learning outcomes statements, over time what is expected in terms of what college graduates know and can do can change. Also, advances in different fields of study require requisite modifications in stated outcomes and learning experiences that comport with those changes. The DQP proficiencies and tuned descriptions of discipline-specific learning provide an impetus for returning to learning outcomes and reconsidering the extent to which they still describe the learning that institutions and programs value—and the extent to which they do so in comprehensible and relevant ways.

Adopting an investigative spirit can add freshness to the review of existing learning outcomes statements by asking questions such as: To what extent are existing outcome statements still relevant and appropriate to the respective discipline and what the institution now expects of all students? To what extent do faculty, staff, and students understand the learning the outcomes describe? To what extent are the outcomes iterative and integrative, building ever greater proficiency over time

***The DQP proficiencies and tuned descriptions of discipline-specific learning provide an impetus for returning to learning outcomes and reconsidering the extent to which they still describe the learning that institutions and programs value—and the extent to which they do so in comprehensible and relevant ways.***

and across the institution? Are the proficiency levels at a high enough bar? Those kinds of questions can engage faculty and staff in a healthy reflective process leading to meaningful revision of outcomes statements and the curricula needed to help students cultivate and demonstrate the expected proficiencies.

*Aligning learning outcomes.*

Aligning the various outcomes across and within an institution is important to ensure that students experience an integrated and supported learning experience throughout the entire institution and acquire the intended combined proficiencies. Alignment is important because it ensures that proficiencies (institutional, general education, program, and course level), disciplinary standards, accreditation needs, and national initiatives (such as LEAP) are congruent. Such alignment also makes it easier for students to move smoothly from one stage of their education to the next. Alignment also refers to the logical relationships between the intended outcomes and the curricular and co-curricular learning experiences that contribute to the proficiencies that undergird the outcomes statements, along with the assignments that demonstrate students' attainment of requisite knowledge and skills. Appendix C contains an example of an outcomes-aligned syllabus. Different levels of outcomes must be aligned with one another and/or with the curriculum and co-curriculum so that students can make connections between their various learning experiences and see coherent proficiencies in what they are accomplishing. An additional alignment piece to consider is the alignment of learning outcomes with student development theory. Among the more promising approaches to the alignment task are curriculum mapping and career profile development.

***Aligning the various outcomes across and within an institution is important to ensure that students experience an integrated and supported learning experience throughout the entire institution and acquire the intended combined proficiencies.***

*Curriculum mapping.*

Curriculum mapping is a process that reveals the degree to which curricula and co-curriculum are constructed to support student achievement of learning outcomes. To that end, using curriculum mapping as a form of gap analysis can be an important process for determining how well an institution has aligned its course requirements, assignments, and co-curricular activities to intended outcomes. In other words, does the educational process that students experience actually contribute to the proficiencies the institution or program deems essential? That question can launch faculty and staff on a reflective process that highlights and identifies gaps and positions people to develop productive and innovative responses.

Curriculum maps often take the form of tables that allow teams of faculty and staff to plot the intersection of outcomes and curricula (Appendix D contains some examples). A curriculum map provides just that—a "map" of the educational experience and path of students. Because it is necessarily a simplified representation of a very complex system, however, the map may over represent some elements of the educational experience at the expense of others. Thus, layered mapping may present a more complete, nuanced picture of alignment.

A curriculum map that compares outcomes, course assignments, and student demonstrations of proficiencies along with scaffolded student development principles, for example, might reveal outcomes that have insufficient curricular support or curricula that are disconnected from outcomes and what students know and are able to do as a result. A curriculum map that relates the outcomes

for numerical literacy with support programs for developmental mathematics might reveal the degree to which the support programs are aligned to the instruction in the mathematics program. By identifying gaps, faculty and staff can collaborate to identify interventions that align programs and better facilitate student attainment of the desired proficiency level. Sandra Bailey, of Oregon Institute of Technology, spoke of her institution's experience with curriculum mapping (personal communication, September 23, 2014):

> As one of the opening events for our Fall Faculty Convocation, we asked our faculty to review and map their program course offerings. Our goal was to create maps, by program, of all of our courses and the kind(s) of General Education learning areas addressed in each; more importantly, however, we wanted to begin a discussion about how each program is presently scaffolded, and how General Education learning areas are addressed—or not—within each program. We provided our faculty with a short overview, course catalogs, poster-sized maps, and plenty of space to work. The results were excellent: not only do we have draft course maps for most of our degree programs, we also have a strong starting place to begin clarifying the definitions and assessment methods for our General Education learning areas, and a much clearer picture about which learning areas need to be strengthened within each program.

Three points are relevant here. First, the curriculum map is not a checklist to be completed by one faculty member to represent a departmental or general education perspective. Rather, curricular mapping is a process of consensus-building around what outcomes mean, where in the curriculum and co-curriculum they are addressed, and what the agreed-upon criteria are for determining whether students have demonstrated the requisite proficiencies. It is a process of asking where learning happens and whether the curriculum is designed in a developmentally appropriate manner to lead students toward attainment of specific outcomes, as well as outlining where students are assessed on their mastery of learning. To that end, mapping can be a process of discovery.

The second point is that mapping the curriculum, while useful to outline the intended structure of the educational program, needs to be coupled with students' actual paths through institutions. Thus, overlaying the actual course-taking patterns of students onto a curriculum map will provide a picture of how students move through and experience the curriculum, where there might be misalignment of sequential or developmental paths, and where course prerequisites are being implemented in meaningful ways.

The third point is that mapping necessarily provides a lens such that what is mapped is what is seen, but what is not included in the map may not be noticed as readily. Utilizing the curriculum mapping as one piece in a larger conversation on student development and scaffolded learning can be helpful to ensure that the placement of various learning experiences as well as their assessment, are appropriate, students are well supported, and that the curriculum builds over time.

To help foster reflective conversations on the outcomes and where they may appear in a curriculum, the process of **Dynamic Criteria Mapping** (see Figure 1), utilized by IUPUI and Ivy Tech Community College of Indiana, is illustrative.

***Curricular mapping is a process of consensus-building around what outcomes mean, where in the curriculum and co-curriculum they are addressed, and what the agreed-upon criteria are for determining whether students have demonstrated the requisite proficiencies.***

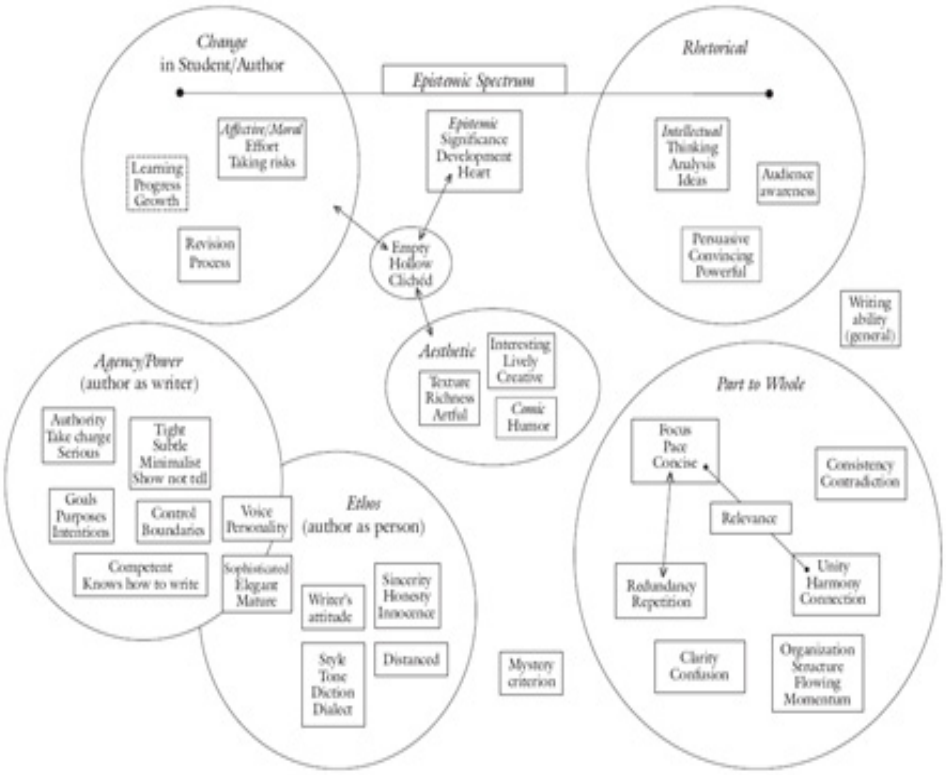


Figure 1. Sample map produced via Dynamic Criteria Mapping

Dynamic Criteria Mapping, developed by Bob Broad (2003), produces normative criteria through an organic and collaborative process in which participants candidly discuss what they do and do not value in actual student assignments. According to Broad, the goal is to get "beyond what we think about how we value students' [work and to identify] what and how we *really* value" student work (p. 132). Those discussions begin by identifying valued demonstrations of learning, which are then converted into normative—but not reductive—criteria. Dynamic Criteria Mapping, thereby, emphasizes collective definitions of what is expected of students in ways that do not oversimplify.

When used in relation to student learning outcomes, Dynamic Criteria Mapping can become a tool for building consensus about what outcomes statements mean. Learning outcomes statements can be interpreted variously, and room for variation can be productive in making transparent the particular approaches of different disciplines and fields. Faculty and staff using Dynamic Criteria Mapping to explicate what outcomes mean and to create criteria for evaluation of student work can result in alignment of assignments to the outcomes those assignments seek to address—in ways transparent to all involved, including students. See Appendix E for additional information on Dynamic Criteria Mapping.

An additional approach undertaken by several campuses involved with the DQP uses the DQP "spiderweb" to map degree programs based on proficiencies. The final report from the SACS project with 22 Historically Black Colleges and Universities outlines a process of **spiderweb mapping** after developing curriculum maps to get a picture of the different areas of focus within the degrees (Reed, 2013). Participants in the HLC DQP project used spiderweb mapping as a catalyst for conversations that ultimately led to revisions of curriculum and co-curricular programs, modifications

***Learning outcomes statements can be interpreted variously, and room for variation can be productive in making transparent the particular approaches of different disciplines and fields.***

of assessment processes, and integration with program review (Rogers, Holloway, & Priddy, 2014, p. 7). Oregon's DQP project involved the development of spiderweb mapping software, examples and instructions of which can be found at the project's website: http://lanecommunitycollege.github.io/oregondqp.org/spider_graphs/index.html, while West Hills College in Coalinga modified the spiderweb into a pie chart approach (Figure 2).

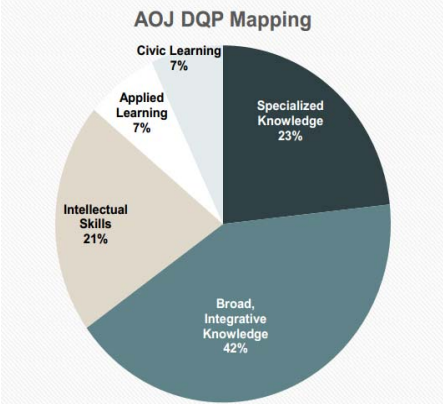


Figure 2. West Hills College Coalinga, AS-T in Administration of Justice degree

Finally, the **career or job profile** is another approach to mapping curricular experiences. Faculty and staff—particularly in the arts, humanities, and social sciences—are not always aware of the range of jobs their students pursue or the career paths they take. At the same time, many students have difficulty recognizing how what they have learned and can do align with certain future opportunities. Career profile creation invites career resource centers, employers, and faculty to develop fuller understandings of how program learning outcomes prepare students for careers. With this knowledge, faculty and staff are better positioned to design assignments that require students to practice and demonstrate the relevant proficiencies and transfer their learning to other contexts.

*Career profile creation invites career resource centers, employers, and faculty to develop fuller understandings of how program learning outcomes prepare students for careers.*

Developing a career profile can take multiple forms and results in richer descriptions of the kinds of careers for which particular programs offer particularly sound training. Engineering faculty in Texas, for example, in a simple graphic identified the different business sectors that employ engineers (Figure 3). The graphic provides an accessible, easily understood representation of the variety of paths that students might take and, as such, provides a context in which students can ponder and evaluate the options available to them.

Disciplines such as engineering are more tightly coupled with their field of practice, which makes career profile development somewhat easier in engineering than in disciplines in the humanities and social sciences. Working with career resource personnel may be helpful in generating descriptions of career and job-skills patterns of recent graduates that align with the proficiencies students acquire in their courses and programs. The result can be resources for students, faculty, advisors, and staff to facilitate transition into the workforce. All to say that there are many and varied ways to engage in mapping student learning across an institution, depending on the questions of interest and type of DQP/Tuning project in which an institution is engaged.

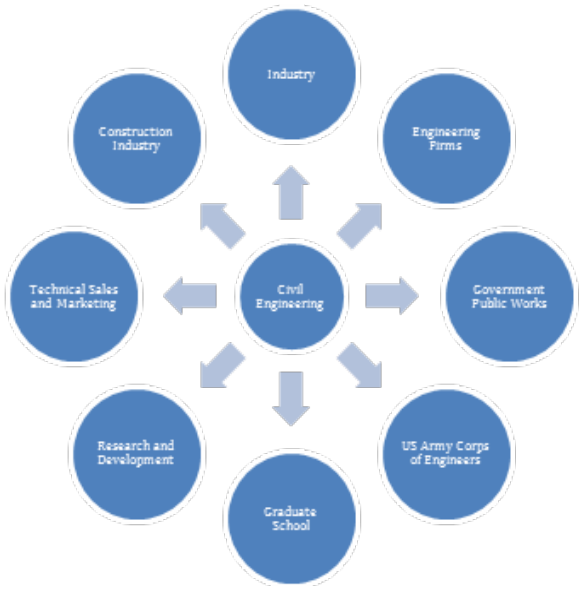


Figure 3. Engineer Career Profile

*Identifying and analyzing gaps.*

By engaging in a Tuning-like process with the DQP, colleges and universities have rewritten and refocused program learning outcomes around the action-verb framework of the DQP. The process of reviewing the DQP proficiencies often prompts faculty to rewrite program or institution-specific learning outcomes that clearly outline what students are expected to know and do, as well as ways that students can demonstrate mastery of those outcomes.

After mapping learning outcomes and aligning expected proficiencies at various levels, the process of reviewing the maps and even determining where outcomes are addressed may reveal a need to write or rewrite outcomes, add assignments and other elements to the curriculum, or reinforce outcomes in various ways outside of the curricular experience. The DQP and definitions of discipline-specific learning can also provide a point of comparison for institutions reviewing their own learning outcomes. The descriptions of the DQP proficiencies and disciplinary core documents, such as those produced by the American Historical Association, in Tuning initiatives often clarify educational values that most institutions already embrace but may not directly address in the work that students are expected to do. Mapping an institution's existing outcomes to the DQP through discussion and consensus building can help administrators, faculty, and staff identify proficiencies not included in approved statements of learning goals. California State University Northridge, for example, reviewed the DQP's civic engagement section to determine the extent to which its general education program adequately addressed the respective proficiencies. As a result of the examination, faculty developed structured pathways for students studying social and environmental issues that can constitute a minor in those programs.

Similarly, departments and programs may map program-specific learning outcomes to the DQP proficiencies or general education outcomes to address the ways discipline-specific teaching and learning relate to general education.

***The process of reviewing the DQP proficiencies often prompts faculty to rewrite program or institution-specific learning outcomes that clearly outline what students are expected to know and do, as well as ways that students can demonstrate mastery of those outcomes.***

In many institutions, general education tends to be partitioned from discipline-specific programs and majors—a situation that disconnects fundamental knowledge and skills from areas of specialization for many students. Using the DQP as an analytical template can help programs identify areas in which there is acceptable alignment and areas in which foundational knowledge and skills need to be addressed in field-specific study. Coupling this to Tuning documents, disciplines can more clearly articulate learning that happens within the major program and learning that occurs through the support of other units across the institution.

For example, if writing-oriented outcomes are identified not just in composition courses but also in general education psychology courses and a course for a marketing major, students are better able to relate what they learned in composition to those other courses and, thereby, develop their writing abilities rather than experiencing each class's writing assignments and instruction as an unrelated experience. Making such connections across the curriculum stands to support student learning by reinforcing knowledge and skills at various points in students' educational journeys and, as a result, increase students' conversancy with what they learn. In another example, the National Communications Association Tuning project, a group of communications experts drafted statements of learning outcomes for their field. With that draft in hand, the group then mapped the outcomes to the DQP to identify how field-specific learning contributes to learning associated with general education. The communications faculty were then able to have a more comprehensive and integrated understanding of what their students were actually supposed to be learning. In this case, Tuning's flexible, collaborative methodology combined with the DQP provided guideposts for corroborating or determining whether a communications program was cultivating in students the expected proficiencies.

***Making connections across the curriculum stands to support student learning by reinforcing knowledge and skills at various points in students' educational journeys and, as a result, increase students' conversancy with what they learn.***

*Alternative transcripts.*

When mapping curriculum, reviewing and revising learning outcomes statements, and undertaking career and job skills profile development, it is important to involve students in the process and to explain to them the educational outcomes and benefits of their degree programs. Providing venues for students to reflect upon and articulate what they have learned and can do also gives them practice explaining to prospective employers the knowledge and skills they can use in the workplace. In addition, drawing on the results of mapping and gap analysis, some institutions are developing alternative forms of transcripts that feature instructive information around students' various educational activities—inside or outside of the classroom. Such transcripts may include a focus on learning outcomes or proficiencies, but they may also include means for identifying additional avenues through which students have met degree requirements. Regardless of the approach undertaken, it is important to involve various groups in conversations around alternative transcripts including registrars, faculty, employers, and students. For an example of the use of digital badging within a department, see Appendix F.

Another possibility is a diploma supplement, an element of Tuning, but one that could be easily linked to DQP and Tuning efforts in the United States. Cliff Adelman suggested in a 2014 Tuning Advisory Board meeting that a diploma supplement—in an easy-to-read, one-page format—can provide a means for

degree programs and degrees themselves to identify the meaning and coherence of the degree and students' educational experiences. His suggestion is that the institution would select the six major proficiencies for the degree, for instance, a bachelor of arts degree, and then the program would select six major proficiencies that are discipline specific to the student's particular degree. By selecting only six, institutions would be able to showcase the unique elements as well as the institution's mission and focus, alerting employers to the skill set of the particular graduate. Further, a three-to-four sentence description of the senior project, written by the student and certified by a dean, would highlight the student's particular areas of interest. Finally, the student would select two contributions to the community or the institution that further highlight the proficiencies. This document, signed by various leaders across the institution, would succinctly incorporate both DQP and Tuning foci.

**Institutional Examples**

**Aligning Academic Programs.** As part of a seven-college effort to develop an associate of arts degree in Hawaiian Studies, Kapi'olani College took up the DQP to investigate revisions of general education (GE) outcomes and its impact on course-level outcomes. To begin that work, cross-disciplinary faculty teams mapped existing GE outcomes to the DQP in a process that involved refining existing GE outcomes to better align them to the proficiencies in the DQP. That process yielded statements that "clarified the college's more general outcomes, making them (potentially) more easily assessable." Additionally, Kapi'olani discovered through the process that the outcomes in several areas were rigorous and "robust" (indicating that the DQP may also serve as a document against which to test existing outcomes).

The college then asked faculty in the Hawaiian studies program to map their course-level outcomes to the DQP outcomes. By doing so, the faculty accomplished several goals. First, they aligned course assignments and outcomes to the general proficiencies of the DQP; second, they assured that those general proficiencies became integral components of the courses in the Hawaiian studies AA program; and, finally, the faculty identified outcomes statements that needed to be refined. As a result, courses in the program are well positioned to better align assignments to course outcomes, and, therefore, the DQP-influenced general education outcomes.

**Co-curricular mapping.** DePauw University used the DQP to inventory co-curricular activities. While student participation in co-curricular programs is important to attain the university-stated learning outcomes, faculty and staff were unable to determine the degree to which students engaged in them or the accrued educational benefit. After developing a system for describing co-curricular activities at three distinct levels (activity, offering, and individual student), the university turned to the DQP to determine how activities contributed to student learning.

DePauw faculty and staff began a process of mapping the co-curricular activities to the proficiencies in the DQP. Although there was some anxiety about "stretching things to associate participation in a co-curricular activity with a DQP outcome," they realized that even when an activity did not itself enable students to achieve a desired outcome it did prepare them to do so. One winter-term service project with a medical focus, for example, found clear connections to the DQP's Civic and Global Learning, Broad Integrative Knowledge, and Intellectual Skills areas. The students were invited to develop arguments to support their chosen service-oriented activity. Faculty and staff involved in the project, thereby, were able to make clear connections between the co-curricular program and the learning outcomes in the DQP. The result is a larger project to rewrite activity descriptions aligned to the DQP's proficiencies. Moreover, students participating in these programs are now equipped to integrate their co-curricular and academic experiences.

## Assessment of Student Learning

Learning outcomes and degree proficiencies, such as those suggested in the DQP or that result from Tuning, obviously, are tied to processes of assessment, but "assessment" needs to be clarified as a term. Two types of assessment are implied. First, the term describes the procedures by which faculty use assignments to evaluate the degree of proficiency with knowledge and abilities students learn in a course or program. Second, "assessment" can refer to the procedures by which program faculty evaluate the degree to which their curricula, pedagogies, and assignments are producing the level of student learning they indicate in their outcomes. The former relates to intentional program design and has been discussed in relation to the coherent alignment of program outcomes, curricula, courses, and assignments. The latter refers to evaluation of program effectiveness—although, increasingly, institutions are coupling the two such that assignments given in courses are "rolled-up" for a picture of program and institutional effectiveness (Richman & Ariovich, 2013).

Program effectiveness is a matter of quality assurance, with quality defined as a level of learning as determined by program faculty. The need to define quality, in fact, is what motivated, in 2009, the introduction of Tuning, originally a European process, to the United States. With multiple national campaigns launched to increase the number of citizens holding degrees or credentials, Lumina Foundation sought a means of assuring that these awards are meaningful and represent real learning. Tuning offers a strategy through which disciplinary experts define the breadth and depth of learning that constitute a degree in that discipline. Assessment, then, offers a means for program faculty to evaluate the extent to which students are achieving the learning that those faculty designate for their programs. Faculty members involved in working with DQP stated that,

> this work provides an opportunity to do assessment right this time instead of hurrying up and getting it done or just putting something in place. DQP has allowed us to have meaningful conversations on why we are doing this, what assessment can do, and how we want to do it to actually improve our students' learning.

Through discussions, faculty members have shifted their focus from individual courses to entire programs, asking whether the program is well designed to foster student achievement on the desired learning. DQP and Tuning allows for pondering whether programs are preparing students to address proficiencies in question by fostering self-reflection on the part of program faculty and staff.

Tuning has focused attention on assessing program effectiveness, which can take many forms, depending on the sorts of questions faculty and staff might have about their students' performance. Ultimately, however, the assessment of program effectiveness is driven by identifying patterns of strength and weakness in students' demonstrated proficiencies. Approaching program assessment this way emphasizes where curricula yield desired student learning consistently and, conversely, where curricula yield less-than-expected student learning. When program faculty and staff identify such patterns of performance, they can take action to address elements of the program that may need to be revised. Assessing program effectiveness can also help program faculty and staff identify

***DQP and Tuning allows for pondering whether programs are preparing students to address proficiencies in question by fostering self-reflection on the part of program faculty and staff.***

where curricula, courses, pedagogies, and assignments may be contributing to or hindering student learning. Where problems emerge, strategies for program revisions can be developed and implemented, with ongoing and regular assessment offering indication that interventions and innovations are having their desired effect. When done in a collaborative environment, assessment of program effectiveness can generate meaningful innovations within a program.

Many institutions are employing rubrics (specifically VALUE rubrics: https://www.aacu.org/value/rubrics) to assess student learning, reframing capstone experiences, redeveloping portfolio approaches, and developing targeted assignments for students to demonstrate their learning. Much of the work of DQP and Tuning has led to reflective conversations around assessment design as well as discussions on pedagogy, curriculum reform, and alternative measures of student learning. By way of example, one faculty member in a history department that had engaged in work with Tuning and the DQP found students' awareness of learning changed dramatically as a result of his work with learning outcomes. When using rubrics aligned to learning outcomes to assess student work, he reported that students visited his office to ask not why they received the grades they did, but how they could improve their knowledge or skills in the learning outcomes identified by the rubric. That change in students' approach evinces a degree of self-awareness in which students understand their own weaknesses. Those students' subsequent action—to seek guidance in improving their learning—suggests that improved self-awareness in students can result in increased self-direction, too. In another instance, the assistant vice provost for undergraduate education at Indiana University, reports that all graduating students are asked to reflect on assignments collected over their four years at the institution around the following questions:

1. What was the key take-away?

2. Describe how you would have improved your work on this assignment?

3. Through this assignment, what have you learned about how you learn and work?

4. What new interests or values have you acquired as a result of this learning experience?

5. How does this learning fit into your life's goals (professional and personal)?

Such an approach allows for students to reflect on their educational journey and tie together diverse learning experiences across their time with the institution. Learning outcomes enable students to work toward learning goals, track their progress, and evaluate their own success.

In addition, institutions that take a reflective portfolio approach and those that are engaged with assignment design have experienced a renewed focus on the importance of feedback to students. Faculty have begun to examine when opportunities for students to react and reflect on their feedback is built into the curriculum and which strategies can be employed to increase practice time given curricular constraints. In some instances, this has involved moving the deadlines

***Learning outcomes enable students to work toward learning goals, track their progress, and evaluate their own success.***

for final submission of assignments to allow for the assignment to be returned to students so that they can react to feedback. In others, it has led to the connection of assignments across multiple courses so that students continue to build upon and work on assignments beyond the time span of a semester. In still others, it has involved intentionally teaching students to give themselves feedback not only through peer and group processes but also through processes of self-reflection. One instance of this is the utilization of rubrics given to students with two columns—one for the faculty member to provide ratings and feedback and the other for the student to complete and submit with the assignment. The intention is that while the student and faculty views of the work may differ at first, over time the two would converge and students would learn valuable skills in self-reflection and critique of their work in relation to criteria for performance.

Most of the institutions and departments that have used DQP and Tuning have yet to assess the extent to which students are acquiring the expected proficiencies. Those that have begun to do so are using a variety of approaches, all of which focus on ensuring that every student is meeting the stated level of proficiency and doing so in a manner that looks across the entire curriculum as opposed to moments of time at the end. As Peter Ewell (2013) outlines in his paper on the implications of assessment from the DQP, the DQP necessarily implies embedded assessment of student learning over time in the form of well-crafted assignments. It is worth reading Ewell's overview of the implications for a grounded understanding of assessment and the DQP. An additional useful resource is Appendix C of the DQP on assignments and assessments and the report by Pat Hutchings, Natasha Jankowski, and Peter Ewell (2014) on the assignment design work conducted with faculty. The NILOA assignment library of DQP-aligned assignments grew out of this focus and from feedback from the field asking for examples of assignments on the ground. The online searchable repository of these assignments is available at http://assignmentlibrary.org. Additionally, Appendix G of the Roadmap includes additional information on signature assignments employed by several DQP participating institutions. Signature assignments are a task, problem, case or project that can be tailored or contextualized in different disciplines or course contexts that provide information on students' integration and application of learning at distinct levels within the curriculum. Still further information on assessment may be found at the NILOA website: http://learningoutcomesassessment.org/index.html

## Sustainability of DQP and Tuning Efforts

The principles and approaches used in DQP and Tuning work are consistent with an institutional culture that values teaching and learning and a student-centered (contrasted with a teacher-centered) educational philosophy. DQP describes its focus as "learning-centered," which offers an excellent frame, since faculty teaching large-lecture courses will undoubtedly say that they are student-centered, since they focus in lectures on what students need to know. "Learning-centered" points to the way in which DQP and Tuning move away from discussions and debates about specific content and towards the types of learning educators strive to help students to develop. These kinds of projects make moves, then, towards pedagogy. When learning outcomes are identified, the pursuant question is "how do we get students there?" That shift lay at the heart of DQP and Tuning projects and the culture they can help to develop. As the Roadmap has described, building that culture requires a concerted and collaborative effort of time and energy.

***"Learning-centered" points to the way in which DQP and Tuning move away from discussions and debates about specific content and towards the types of learning educators strive to help students to develop.***

Institutions and organizations who undertake work with DQP and Tuning hope such efforts will make a lasting impact. Any lasting impact depends, however, on planning for sustained engagement. Where previous projects have seen limited impact, it is typically because extensive thought was given to initial phases of the work without adequate planning being given to strategies for longer-term engagement.

**Implementing with Fidelity**

Neither the DQP nor learning outcomes documents produced by state, regional, or national Tuning initiatives are prescriptions. Rather, in the words of the DQP itself, they "provide a baseline set of reference points for what students should know and be able to do." As "reference points," the DQP's proficiencies (or those in similar documents) serve as inputs to institutionally distinct work. Faculty, staff, and administrators can refer to them as they deem appropriate for their own particular initiatives or goals. They can be used to benchmark existing outcomes or to identify gaps in them. They may be used to integrate general education and specialized study more soundly or to stimulate richer discussion about an institution's own particular shape. However, they may also be modified and revised to align with institutional priorities and focus—that is, they may be adapted, not necessarily adopted.

***Neither the DQP nor learning outcomes documents produced by state, regional, or national Tuning initiatives are prescriptions. Rather, in the words of the DQP itself, they "provide a baseline set of reference points for what students should know and be able to do."***

**Developing Institutional Memory**

Turnover of faculty, staff, and institutional leaders is to be expected in the life of an institution. Unfortunately, it also can hamper ongoing efforts to strengthen student learning and success. Establishing systems for developing institutional memory can help embed changes into institutional culture. Faculty governance structures, for example, can provide a means of sustaining engagement in this kind of work by establishing it as a priority. Additionally, using bottom-up processes that depend less on centralized leadership can help to sustain ongoing engagement with DQP and Tuning by ingraining efforts within the practice of programs and departments and, in the process, insulating work from the natural movement of personnel. Faculty champions can emerge from that approach. The role of faculty champions cannot be underestimated, since they can often lead by voice and example in ways that address their colleagues' interests and concerns. Archiving materials with explanations of what, how, and why work was undertaken can, moreover, provide a repository of information that contextualizes activities, including successes and failures, that can continue to guide future work—an approach orchestrated by Provost Jon Young of Fayetteville State University.

**Expanding the Reward Structure**

To strengthen teaching and learning, for which the DQP and Tuning are designed, requires effort by faculty and staff; thus, incentives for participating can be important for advancing initiatives. As with other aspects of this work, how institutions recognize and reward faculty and staff for engaging in it will be dependent on individual contexts and existing systems. Contingent faculty pose potential challenges for rewarding work. As the ranks of contingent faculty grow, more and more instruction and assessment of learning depends on their efforts. However, contractual agreements can limit the extent to which they are involved in initiatives as described above. Institutions rightly avoid further exploitation,

so the inclusion of contingent faculty depends on finding means to compensate them for time spent on the development and assessment of learning outcomes (see Kezar and Maxey's 2014 paper on assessment and non-tenure-track faculty for additional information). Indeed, if teaching and student accomplishment are institutional priorities, then recognition of faculty and staff working on these issues should reflect those priorities.

**Broadening the Conversation Base**

While some initiatives began with multiple institutions, such as large-scale Tuning projects or the examples of both Kapi'olani College and Georgia State University/Georgia Perimeter College, others may over time evolve in that direction and involve community stakeholders. Doing so may help institutions respond to changes in the community or to collaborate with other institutions in partnerships. Institutions working with the DQP and Tuning might also reach out to local K–12 schools or systems. Substantial time and energy have been invested in both the Common Core State Standards (CCSS) and complementary state-specific documents (see Conley and Gaston's 2013 paper on alignment between the Common Core and DQP). Institutions that have worked with the DQP and Tuning are well positioned to collaborate with colleagues in local school systems to explicate that alignment. As with transfer, intentional efforts

***If teaching and student accomplishment are institutional priorities, then recognition of faculty and staff working on these issues should reflect those priorities.***

**Institutional Examples**

Because both the DQP and Tuning encourage identification of learning scaled to degree level, each can be a valuable tool for working on issues of transfer and articulation. Texas Tuning projects in science and engineering were designed for this purpose, while other states, such as Utah, included transfer among its goals. In addition to benefits for transitioning students, productive partnerships can emerge from work among institutions. In Minnesota, for example, a project to tune graphic design programs in the state resulted in a partnership between South Central College (SCC) and Alexandria Technical College (ATC). The project united the two colleges' programs around specific class projects in ways that leveraged each college's resources. ATC's particular strengths in and resources for design were paired with those of SCC's for production. Students collaborated across the two schools to produce posters and banners. At ATC, students created designs that were then uploaded to SCC's InSite workflow system. Students at SCC then "preflighted" the designs and produced them on four-color presses and large-format printers. Together, the colleges reinforced student learning as identified in learning outcomes produced in the larger Tuning initiative.

Brandman University undertook a process that extended its work with AAC&U's LEAP outcomes to incorporate the DQP. Having initiated work on general competencies with the LEAP outcomes, a general education task force then employed the DQP to establish a "framework for 21st-century competencies." That process entailed aligning the GE competencies to the DQP, which provided a structuring device for the university's competencies. By using the DQP to organize the competencies, the task force integrated GE competencies throughout the curriculum. In this example, the DQP was introduced to provide greater organization to newly developed structures. To do so, the university maintained the DQP's own structure. Accepted as a whole, the DQP enabled Brandman to increase the impact of its own general education competencies.

**Institutional Examples Continued**

California State University East Bay (CSUEB) used the DQP to develop institutional learning outcomes. Responding to the faculty senate's call to develop outcomes for the university, the campus engaged in a series of interviews and forums involving administrators, faculty, staff, and students at the university, resulting in consensus about broad learning outcomes. Associate Vice President Susan B. Opp reported, "While our ILOs do not map one-for-one with the DQP dimensions, the Degree Qualifications Profile has been a useful framework during the development and approval of our ILOs. We have used the DQP to help us frame discussions regarding the meaning, quality and integrity of a Cal State East Bay degree and to examine linkages between general education, academic majors, and our ILOs." CSUEB's example demonstrates the role that the DQP can play in encouraging reflection and discussion about what degrees mean, even if the DQP did not serve to structure the resulting outcomes.

in this area may smooth matriculation of students from high school into college and university classrooms. How institutions move their work with the DQP and Tuning to a larger stage depends on a wide variety of potential needs, questions, or perceived benefits for doing so.

## Final Thoughts

There is no single best way to introduce and implement the DQP or Tuning. The DQP's authors refer to its proficiencies as "reference points." Each of the institutions and organizations mentioned in this roadmap undertook distinctive efforts, motivated by needs and questions particular to their own contexts. To address those needs and questions, each institution referred to the DQP and Tuning as appropriate to its context, scope, and goals—and all of them reported the DQP and Tuning as having played important roles in enhancing student learning. While each used collaborative processes and consulted broadly with a variety of campus constituencies (and, in some instances, external stakeholders), each institution framed its approach somewhat differently to address its particular needs and goals. This flexibility in application is one of the attractive aspects of both the DQP and Tuning—across multiple institutions as well as specific, single-campus programs. The DQP and Tuning each provides resources that can help to stimulate, frame, structure, or inspire work that addresses the very particular needs of individual campuses, leads to better curricular integration and clearer expressions of institutions' educational purposes, and ultimately strengthens student learning. Further, they work in concert with one another such that institutions who work with the DQP do so through a Tuning-like process of faculty conversations around students and their learning.

Most institutions that have used the DQP thus far began with a fairly broad vision of implementation and had to scale back their focus to one or two targeted uses of the DQP. At the same time, each undertook to varying degrees a review of learning outcomes, a process of mapping and aligning outcomes, and campus-wide discussion on assessment of student learning.

Most impactful across the board have been the meaningful, instructive conversations about how to increase student accomplishment that have led to

the need to focus implementation efforts. Faculty who have worked with DQP and Tuning agree that DQP/Tuning efforts, even though challenging to do well, bring about a shift in perspective that increases awareness of how various elements of education reinforce, support, and enhance student learning. This has led to conversations around teaching, learning, and pedagogy and has fostered cross-disciplinary and cross-institutional conversations that lead to thinking about "our curriculum" rather than "my course." Institutions that engaged in Tuning and DQP efforts in Utah stated that the work contributed to cultural changes within the institutions. As one faculty member involved in these initiatives said in an institutional report,

> After having conversations with my peers from different institutions I was surprised to learn how much agreement we shared on what we want our students to know and be able to do. Now when I am asked what I teach I respond by stating 'students,' as opposed to stating my content area—because students are the focus of all that we do.

Peter Ewell referred to the DQP as a "universal translator," as it makes it possible for faculty from different disciplines to speak with and understand one another, fostering cross-institutional conversations, a renewed focus on students and their learning, and a search for how faculty can facilitate the design of intentional, coherent, and meaningful educational experiences for all students. The lens provided by DQP and Tuning work is one of a systemic view of the educational landscape because it helps those involved in supporting students to think more concretely about how students move through higher education as a disparate system. DQP and Tuning require time and space to unfold. But because the process ultimately brings people together around a shared purpose and a desire for students to succeed, the benefits are well worth the invested effort.

***The lens provided by DQP and Tuning work is one of a systemic view of the educational landscape because it helps those involved in supporting students to think more concretely about how students move through higher education as a disparate system.***

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# Appendix A: Change Management Resources

Change Management

Literature on facilitating and managing change within organizations is provided including references on systems thinking, building shared vision, and understanding organizational processes and history when altering systems.

**Related Articles and Books**


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# Appendix B: Writing Learning Outcomes Checklist

Does the outcome describe what students should represent, demonstrate, or produce?

Is the outcome driven by active verbs?

Does the outcome align with collective intentions that are part of the curriculum and co-curriculum?

Does the outcome map to curriculum, co-curriculum, and educational practices?

Is the outcome collaboratively authored and collectively accepted?

Does the outcome incorporate or adapt professional organizations' outcome statements if they exist?

# Appendix C: Example Syllabus

This example syllabus is meant to provide suggestions on how to incorporate expected learning outcomes and methods for assessing learning outcomes into a course syllabus for purposes of alignment. This example syllabus is meant to provide examples and suggestions rather than serve as a template. In addition, the outcome statements are sample and not specific to any course, but serve to outline the structure that a syllabus might take that shows students aligned outcomes and assignments.

**Course Description**

Brief description of the course and the knowledge and skills students will acquire over the course of the class. Include a statement on the goals that will be accomplished and a statement outlining what students will know and do at completion of course.

**Expected Learning Outcomes (Option A)**

Upon completion of this course, students will be able to:

1. Describe appropriate practices in the field.
2. Explain the theoretical foundations related to methods used in the field.
3. Demonstrate their knowledge of content areas within the course.
4. Identify appropriate techniques based on the appropriate methods learned in the course.
5. Articulate their personal values regarding material covered in the course.

These expected learning outcomes for the course align with the following program and/or general education and/or institution-level learning outcomes (state each related and aligned learning outcome here).

**Methods for Assessing the Expected Learning Outcomes (Option A)**

The expected learning outcomes for the course will be assessed through:

Exams, In-Class Application Activities, Muddiest Point Classroom Assessment Techniques, Non-Graded Quizzes, the Research Paper, Reaction Papers, Class Discussions, One-Minute Paper Classroom Assessment Techniques, Polling the Class, Application Card Application Techniques, Assignments 1, 2 and 3, and Active Learning Activities.

**Expected Learning Outcomes & Methods for Assessing those Outcomes (Option B)**

Upon completion of this course, students will be able to:

1. Describe appropriate practices in the field.

   Methods for Assessing this Expected Learning Outcome: Exams 1-3, In- class Application Activities, Muddiest Point Classroom Assessment Techniques (CATs), and Non-Graded Quiz (CATs)

   Aligns with the following program, general education, and/or institution-level learning outcomes.

2. Explain the theoretical foundations related to methods used in the field.

   Methods for Assessing this Expected Learning Outcome: Exams 2-3, Research Paper, Reaction Papers, Non-Graded Quiz (CATs), Assignment 1, and In-Class Application Activities

Aligns with the following program, general education, and/or institution-level learning outcomes.

3. Demonstrate their knowledge of content areas within the course.

   Methods for Assessing this Expected Learning Outcome: In-Class Application Activities, Application Card CATs, Class Discussions, Assignment 2, and One- Minute Paper CATs

   Aligns with the following program, general education, and/or institution-level learning outcomes.

4. Identify appropriate techniques based on the appropriate methods learned in the course.

   Methods for Assessing this Expected Learning Outcome: Exams 1-3, In- Class Application Activities, Active Learning Activities, Polling the Class CATs, Assignment 3, and Muddiest Point CATs

   Aligns with the following program, general education, and/or institution-level learning outcomes.

5. Articulate their personal values regarding material covered in the course.

   Methods for Assessing this Expected Learning Outcome: Reaction Papers, In-Class Application Activities, Polling the Class CATs, Active Learning Activities, Research Paper, One Minute Paper CATs

   Aligns with the following program, general education, and/or institution-level learning outcomes.

# Appendix D: Curriculum Mapping Examples and Resources

## DQP Learning Outcomes Statement Mapping Tool

| Institutional/ Program Learning Outcomes Statements | Specialized Knowledge | Broad and Integrative Knowledge | Intellectual Skills | Applied and Collaborative Learning | Civic and Global Learning | Institution Specific Areas |
|---|---|---|---|---|---|---|
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |
| 6. | | | | | | |

| | Introductory Course | Research Methods | Advanced Content Course A | Laboratory / Practicum Course | Advanced Content Course B | Advanced Content Course C | Advanced Content Course D | Capstone Course |
|---|---|---|---|---|---|---|---|---|
| **Content** | | | | | | | | |
| SLO 1: Disciplinary knowledge base (models and theories) | Exam Questions | | Exam Questions | | Exam Questions | Exam Questions | Exam Questions | Capstone Portfolio |
| SLO 2: Disciplinary methods | | Exam Questions | | Exam Questions | | Exam Questions | | Capstone Portfolio |
| SLO 3: Disciplinary applications | Exam Questions | | Exam Questions | | Class Project | | Term Paper | Capstone Portfolio |
| **Critical Thinking** | | | | | | | | |
| SLO 4: Analysis and use of evidence | | Term Paper | | Lab Paper | Class Presentation | | Term Paper | Capstone Portfolio |
| SLO 5: Evaluation, selection, and use of sources of information | Annotated Bibliography | Term Paper | | Lab Paper | | Term Paper | | Capstone Portfolio |
| **Communication** | | | | | | | | |
| SLO 6: Written communication skills | Reflection Essays | | | Lab Paper | | Term Paper | Term Paper | Capstone Portfolio |
| SLO 7: Oral communication skills | | | Class Presentation | Poster Session | Class Presentation | Class Presentation | | |
| **Integrity / Values** | | | | | | | | |
| SLO 8: Disciplinary ethical standards | | Reflective Paper | | IRB/ACUC Proposal | Reflective Paper | | | Capstone Portfolio |
| SLO 9: Academic integrity | Class Assignments & Exams | Exams & Term Paper | Class Exams | Class Assignments & Exams | Class Assignments & Exams | Exams & Term Paper | Exams & Term Paper | Capstone Portfolio |
| **Project Management** | | | | | | | | |
| SLO 10: Interpersonal and team skills | | | Peer Review of Team Skills | | Project Client Feedback | | Peer Review of Team Skills | Capstone Portfolio |
| SLO 11: Self-regulation and metacognitive skills | Class Assignments & Exams | | | Class Assignments & Exams | Class Assignments & Exams | Exams & Term Paper | | Capstone Portfolio |

**Curriculum Mapping Related Articles and Books**

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Udelhofen, S. (2005). *Keys to curriculum mapping: Strategies and tools to make it work*. Thousand Oaks, CA: Sage Publications, Inc.

**Sample Curriculum Mapping Tools and Development Resources**

Assessment Matters

Judith Miller, executive director of assessment from UNF has assembled material related to curriculum mapping. Note item 2. Curriculum Mapping (10/23/2009). http://www.unf.edu/uploadedFiles/aa/oira/assessment/AssessmentMatters/vol%201%20no%202%2010%2023%2009%20AM_2.pdf

Southern Connecticut State University

SCSU provides some very developed and evidence-based curriculum mapping documents and resources with program-level examples. http://www.southernct.edu/faculty-staff/faculty-development/curriculummapping.html

University of Hawai'i

Describes Curriculum mapping and curriculum matrix: definitions, examples, and best practices. http://manoa.hawaii.edu/assessment/howto/mapping.htm

University of West Florida's Center for University Teaching, Learning and Assessment

On this website, information is available about curriculum mapping with an example. http://uwf.edu/offices/cutla/

Indiana University Southeast

Provides information on what curriculum mapping is, how it is carried out at this institution, examples of curriculum maps, and other resources for supplementary information on the topic. http://www.ius.edu/oie/program-assessment/resources/curriculum-mapping.html

# Appendix E: Dynamic Criteria Mapping Resources


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Evans, Donna. (n.d). *Using elements of dynamic criteria mapping as a process facilitating DQP*. This page gives an overview of how Eastern Oregon University is attempting to incorporate Dynamic Criteria Mapping into its DQP program. http://www.academia.edu/2589500/Using_Elements_of_Dynamic_Criteria_Mapping_as_a_Process_Facilitating_DQP

East Carolina University- Examples, models, and other resources for DCM are provided on ECU's website. http://www.ecu.edu/cs-acad/writing/wac/faculty_transfer_skills.cfm

Stalions, E.W. (2007). *Dynamic Criteria Mapping: A study of the rhetorical values of placement evaluators.*(Doctoral Dissertation.) Retrieved from: http://search.proquest.com/docview/304900396

# Appendix F: A Plan for Digital Badging
# Nancy Quam-Wickham, Ph.D.

The Department of History at Long Beach State University has developed a program for students to demonstrate their achievement of key disciplinary skills: "The History Researcher" designation, a digital badging initiative. This initiative is closely linked to another initiative—our competency-based research methods program—that we have just implemented as part of our History Methods course.

Using a software platform that is easily integrated into our learning management system, we created a set of fifteen online modules that allow students to test their research skills development. Designed by two historians and our disciplinary librarian, each module consists of several short lessons on discrete topics and upon successful completion of each module, we award a digital badge ("History at the Beach Researcher Level 1-15") to the student who may then display this departmental award on her or his e-portfolio, LinkedIn page, Facebook page, or resume. While our competency-based research lessons are mandatory for all students enrolled in our Methods course, participation in our Digital Badging initiative is entirely voluntary.

Within each lesson, the tasks require students to hone their research skills in ways that resemble (digital or brick-and-mortar) library scavenger hunts. Using a backwards-design approach informed by our assessment data of student achievement, we designed these modules to strengthen students' skills in quite intentional ways. For instance, like most students, our new history majors tend to prefer using digital resources located through online library searches. But historians also must have solid library research skills.

Our module on using newspapers in historical research begins with relatively easy tasks that ask students to find a particular newspaper article on a general topic using, for instance, the online *Los Angeles Times*. As they progress through the lessons, they proceed to tasks that require them to go to the library and locate microfilmed newspapers not available in digital format; specific questions require students to access articles in these newspapers. A subsequent lesson asks students to locate information about a particular event, in this case, the celebration of the Emancipation Proclamation in San Francisco. To attempt the task, students must apply previous knowledge or use existing skills: They must know details of both the Emancipation Proclamation and San Francisco's history, as well as about the nature, richness, and limitations of newspaper sources and how to utilize them efficiently (i.e., search by date). In progressively more detailed questions, students must determine that the city's African-American community newspaper, the *Pacific Appeal*, is the only source that will allow them to answer the lesson's specific questions about the city's celebrations. Our tasks require the integration of skills and knowledge that students must possess to succeed in our program and beyond.

# Appendix G: Signature Assignments Resources

Related articles on signature assignments, or the tasks, problems, cases, or projects which are tailored to specific disciplines, majors, or courses are presented below.

**Related Articles**

AAC&U News. (2011, April). *Signature Assignments Become a Signature Practice at Salt Lake Community College*. Retrieved from: http://www.aacu.org/aacu_news/aacunews11/april11/feature.cfm

Driscoll, A. (2011, January). *Signature Assignments* (Presentation at WASC Resource Fair). Retrieved from: http://www.slideshare.net/WascSenior/amy-driscoll-signature-assignments

**Sample Resources**

University of Texas – Arlington: http://www.uta.edu/irp/unit-effectiveness-process/assets/Signature-Assignment-Resources.pdf

California State University - Long Beach: Example of signature assignments and corresponding rubrics. http://www.ced.csulb.edu/offices/assessment-office/creating-rubric

Salt Lake Community College: This site provides instructions for identifying, creating, and assessing critical thinking signature assignments: http://www.slcc.edu/assessment/critical-thinking-using-signature-assignments.aspx

This link is the Spring 2013 guide "Implementing Critical Thinking with Signature Assignments." https://www.slcc.edu/assessment/docs/Critical%20Thinking%20Signature%20Assignments%20Guidebook%20Rev%201-3.pdf

# Appendix H: Locating Learning Outcome Statements Online

As institutions, programs or departments undertake a process of analyzing their learning outcome statements, they may turn to other institutions or departmental learning outcome statements as a starting point or to see what others have stated already. From the 2013 national survey, participants indicated that student learning outcomes statements were the most common, publicly available assessment related information (Kuh, Jankowski, Ikenberry, & Kinzie, 2014). However, the location of these outcomes statements may not be readily transparent and departmental learning outcomes may be more difficult to find. Increasingly institutions have a centralized location for learning outcomes and assessment such that searching a departmental website for such statements may not prove as fruitful. From work done at NILOA involving scanning institutional websites there are several locations which may provide the desired information including:

**Assessment page for the institution.** This centralized repository generally includes learning outcomes statements for the entire institution, general education, and individual departments. For example see: http://www.slcc.edu/assessment/AssessmentTable/index.htm

**Accreditation report.** While not all departmental learning outcomes will be located in an institutional accreditation report, they do serve as a source of information on learning outcomes statements, if the full report is posted on the institution website. For example see: http://www.pdx.edu/academic-affairs/institutional-accreditation-materials

**Course catalog or student handbook.** The course catalog may contain information on the institution's learning outcomes as well as statements within each program related to the learning outcomes for the program. For example see: http://www.depaul.edu/university-catalog/academic-handbooks/Pages/default.aspx

**Additional Tips**

Search terms to use when looking at an institution website include: assessment; student learning outcomes; outcomes assessment; and student learning outcomes statements.

Student learning outcomes statements are generally located under the provost or academic affairs web pages. In addition, searching for an office of assessment or the office of institutional research may provide additional information on learning outcomes.

If an institution is part of a system or has state reporting requirements, learning outcome statements may also be found on the system website or in an accountability report for the state or system.

Of course emailing a department chair and asking what their learning outcomes are if they are not readily available is also a rather effective approach and may lead to further conversations on why the different outcomes were chosen and how they are assessed within a program. This approach may be especially useful if there is an assessment management software being used where assessment related information may be password protected.

## National Institute for Learning Outcomes Assessment

For more information, please contact:

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