DQP

TUNING

IMPACT STUDY

Developing faculty consensus to strengthen student learning

David W. Marshall, Natasha A. Jankowski, & Terry Vaughan III

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NILOA Mission

The National Institute for Learning Outcomes Assessment's (NILOA) primary objective is to discover and disseminate the ways that academic programs and institutions can productively use assessment data internally to inform and strengthen undergraduate education, and externally to communicate with policy makers, families, and other stakeholders.

Tuning Impact Study: Developing Faculty Consensus to Strengthen Student Learning

David W. Marshall, Natasha A. Jankowski, & Terry Vaughan III

Introduction

Tuning is a bottom-up, faculty-led process which leads to the creation of a discipline-specific learning outcome document along with a degree profile that is used to communicate the value of a particular degree to a variety of audiences including students, employers, policy makers, and the general public. Tuning, introduced in the United States in 2009, involves a five-part process to develop a discipline core: defining the discipline core, mapping career pathways, consulting stakeholders, honing core competencies and learning outcomes, and implementing results locally and writing degree specifications.[1] The process of Tuning produces statements of learning that serve as "reference points" for faculty (Adelman, 2009). The developed discipline core includes program-level outcomes scaled to degree-level, and teaching/learning oriented explanations of the discipline.

From the state-based and discipline-led Tuning projects, a wide swath of U.S. higher education has been involved. To date, there is documented involvement in Tuning from over 340 institutions of higher education including a mixture of public and private, community colleges and universities. Over 400 faculty representing 21 different disciplines have participated along with numerous employers, students, and alumni. In addition to eight states, two disciplinary associations have been involved (American Historical Association and National Communication Association).

In contrast to the description of the process of Tuning outlined in the Tuning process report (Marshall, 2017), this study presents the outcomes from the work of Tuning in the United States from 2009-2016. The findings in this report emerge from a review of interviews, surveys, institutional activity reports, grantee interim and final reports, project evaluation reports, observations of project meetings, conference presentations, journals, and materials developed from the Tuning process. This Tuning impact study explores the intended outcomes of Tuning as well as the assumptions behind the benefits of engaging in the Tuning process. For instance, in a pre-survey of faculty, state-leaders, and students, respondents indicated their agreement (Strongly and Very Strongly) with statements regarding the potential of Tuning to achieve a variety of desired ends (Figure 1).

> *Tuning is a bottom-up, faculty-led process which leads to the creation of a discipline-specific learning outcome document along with a degree profile that is used to communicate the value of a particular degree to a variety of audiences.*

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[1] For an overview of the Tuning process or to learn how to undertake a Tuning project, please see *Tuning: A guide for creating discipline-specific frameworks to foster meaningful change* (Marshall, 2017). Please see Appendix A for an overview of the different Tuning projects undertaken in the United States.
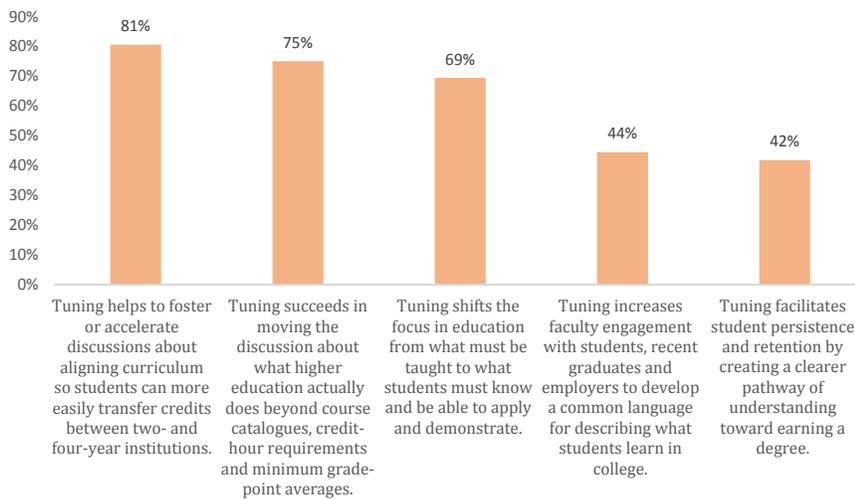
Figure 1. Desired Ends of Tuning.

The chart shows the following categories and percentages:

- Tuning helps to foster or accelerate discussions about aligning curriculum so students can more easily transfer credits between two- and four-year institutions. — 81%
- Tuning succeeds in moving the discussion about what higher education actually does beyond course catalogues, credit-hour requirements and minimum grade-point averages. — 75%
- Tuning shifts the focus in education from what must be taught to what students must know and be able to apply and demonstrate. — 69%
- Tuning increases faculty engagement with students, recent graduates and employers to develop a common language for describing what students learn in college. — 44%
- Tuning facilitates student persistence and retention by creating a clearer pathway of understanding toward earning a degree. — 42%

The Tuning process end goal is to make the value of any degree more clearly visible to students, academics, and employers by reaching consensus on desired disciplinary learning.

Proponents of Tuning argue that having discipline focused learning outcomes helps clarify what a degree in a particular field means and why it represents learning in that particular field. It provides insights for students to more clearly see the end results of their learning as well as the learning pathway to help get them there. Tuning also may inform transfer through providing shared learning outcomes to which curriculum maps could be aligned (81%), refocuses educational design on students and their learning as opposed to teaching (69%), increases engagement with employers and students (44%), fosters collegiality, and increases retention and persistence by providing students with transparent pathways (42%). How has Tuning faired on these different points of interest? The following five sections present the findings of the Tuning impact study addressing reaching consensus, fostering faculty-led cross-institution discussions, learning-focused transfer and pathway conversations, expanded conversations on educational redesign and assessment, and student focused and employer engagement. The report concludes with a review of common misconceptions and challenges as well as final thoughts.

Reaching Consensus

Part of the Tuning process was to make explicit implicit expectations, involving various groups not normally part of learning outcome conversations such as employers, students, and alumni. The bottom-up nature of the Tuning process is designed to create a common language for describing subject-specific knowledge developed by faculty. The common language serves as a series of clearly visible reference points for all who work in the discipline. These reference points are intended to be written in such a way that they can be understood by faculty and administrators at various colleges, as well as by students, employers and the general public. In short, the Tuning process end goal is to make the value of any degree more clearly visible to students, academics, and employers by reaching consensus on desired disciplinary learning. The process of reaching consensus is thought to entail greater understanding and collegiality between and among faculty, as well as greater involvement of students and employers in the process.

All of the groups that participated in the Tuning process were able to reach consensus on discipline-specific learning outcomes and develop disciplinary profiles.

The Tuning process led to statements regarding the nature of the subject area, general descriptions of the degree programs, occupations to which the program is connected, and subject-specific learning outcomes. The finished projects outline what it means to have a degree within a particular field. There is variation across the different Tuning projects regarding the level at which the degree is focused—associates, bachelors, masters, other credentials, etc., but each project included discussion of the subject-specific learning outcomes at varying levels of academic difficulty.

The development of consensus-based learning outcome statements for the different disciplines took a variety of paths but included review of existing learning outcome statements as well as alignment with various national standards. For instance, Indiana's Chemistry Tuning group (IHEC, 2009) based their work upon existing outcomes developed by one of the participating institutions along with the requirements of the American Chemical Society (ACS) and the Higher Learning Commission's (HLC) institutional accreditation guidelines. The Education team began with the existing standards developed by the Association for Childhood Education International (ACEI), modifying the standards with appropriate language and intent to ensure specificity to Indiana's teachers (IHEC, 2009). In Minnesota (2010), faculty conversations about the material taught within each institution unearthed "universal agreement" on the key knowledge, skills, and goals to be taught at each college. Although there were discussions of definitions of terms, there was little disagreement on the pattern of skills that the students needed to learn (Minnesota Office of Higher Education, 2010). And finally, the Graphic Design team from Minnesota examined the National Association of Schools of Art and Design (NASAD) accreditation standards along with those of the University of Minnesota to reach consensus and alignment. Disciplinary teams that did not have existing external standards to review consulted the Degree Qualifications Profile (DQP) and/or the learning outcomes developed by each institutions' discipline as a point of entry for discussion and consensus but ultimately were able to develop a shared consensus document of expected learning outcomes.

In a post-survey of Tuning project participants, 72% indicated that the project was worth undertaking, and 83% indicated that it was important to solicit the views of an array of stakeholders in the process of defining what the discipline-specific degree means. Further, 67% claimed that the Tuning process can be used to increase engagement with students, recent graduates and employers—indicating that the process of reaching consensus through faculty-led conversations with a variety of stakeholder input was successful. Even with the variety of stakeholders involved, 64% of faculty indicated that Tuning provided faculty appropriate control over determining key learning outcomes.

Fostering Faculty-led Cross-Institution Discussions

All of the projects indicated the importance and value of faculty conversations around student learning as well as opportunities for faculty to meet face-to-face with faculty from different institutions. The final report from Indiana's Tuning project stated,

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…through the work of the Tuning Project, faculty members from a variety of institutions have had the opportunity to meet and converse. Across the disciplines that were "tuned," faculty members invariably stated that they enjoyed the opportunity to engage with faculty from different institutions, and particularly across the two- and four-year sectors. The conversations around Tuning built trust between the faculty, and have developed relationships that will be helpful in the future, both in potential continued Tuning efforts, and around areas like transfer, articulation…(IHEC, 2009, p. 6).

These important and meaningful conversations invariably took more time than anticipated, but evaluation reports of the projects listed the main strength of the process as the collaborative opportunities that it afforded. For instance, one report indicated that "Cross-institutional and cross-sector meetings do not occur terribly often—all participants noted that these opportunities were valuable, built trust between individuals and institutions, and could be a sustainable aspect of the project" (IHEC, 2009, p. 6). The opportunity to talk with faculty from other institutions also led to "improved congeniality, engagement, and understanding across higher education sectors" (THECB, 2014a, p. 1). In the vast majority of projects, participants indicated a desire to maintain the cross-institution working groups, moving conversations into discussion of degree-specific learning outcomes in graduate programs as well as other cross-sector initiatives. It was clear that an outcome of bringing faculty from multiple institutions together to talk about student learning within their discipline was the establishment of a foundation for future work around learning outcomes and related student-focused initiatives.

Tuning has led to increased collaboration among institutions with little to no prior communication regarding learning outcomes.

A strength of the cross-institution Tuning process was the involvement of a diversity of institutional types, where team members from two- and four-year institutions as well as large and small, public and private, brought new perspectives and helped to break down stereotypes. In the final project report from Minnesota, participants indicated that the Tuning process brought to the surface common ground leading to appreciating "one another as people in our common effort to train students to enter the design field. We want to work together because it just seems right for us, for our students, for our industry, for our state, for our world. It **IS** as simple as that" (Minnesota Office of Higher Education, 2010, p. 1).

The collaborative dialogue also helped to alleviate suspicion and skepticism about the project. Participants from South Central College stated that

…after our second meeting, we were hooked and enthusiastically proceeded in a positive manner. We enjoyed meeting others in the program and going to their colleges and visiting with their students, administrators, etc. While we all have a little bit different attitude towards our mission, we all were striving to find similarities and the end product was quite fruitful (Minnesota Office of Higher Education, 2010, p. 1).

These collaborative, cross-institution discussions are ongoing. For example, as a result of the Tuning project a biology team member from the University of

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Minnesota submitted a proposal to develop a state-wide conference on biology education as well as established the Minnesota Consortium of Undergraduate Biology Education (MnCUBE) to promote ongoing interactions among biology faculty across the state. Further, the faculty-led discussions fostered better alignment of the curriculum to shared learning outcomes as well as mutual respect between faculty from different institutional types. Through the discussion process, faculty shared their teaching process, resources that their colleges have available to students, and the special emphasis supported at each institution—allowing for similarities but also differences to emerge. Faculty groups visited each other's campuses and shared samples of student work, moving into conversations around learning-focused transfer as well as issues of pedagogy, assessment, and assignment design.

Learning-Focused Transfer and Pathway Conversations

Learning outcomes efforts have traditionally focused to a great extent on individual institutions. The focus of Tuning on engaging with faculty across institutions led to connections with transfer and pathway efforts. For instance, the Midwestern Higher Education Compact (MHEC) project led to revised general education and transfer agreements working across state lines within two different disciplines. The Texas Tuning project focused on transfer and connections with student success efforts, resulting in statewide articulation agreements in 12 disciplines. Within Indiana, the Tuning efforts facilitated "deeper discussions about how the degree levels work together, particularly the Associate's and Bachelor's degrees" leading to conversations on "the way curriculum is scaffolded" across institutions (IHEC, 2009, p. 11). In the final project report from the Utah System of Higher Education (2014), participants indicated that degrees were now being identified by transparent learning outcomes, competencies, and assessments, not by credits or seat time, allowing for learning-focused transfer conversations to emerge. In Kentucky, community college faculty were more willing than four-year to explore transfer, but the multi-institution approach to Tuning through face-to-face conversations helped to facilitate meaningful transfer and pathway dialogue by establishing trust and shared understandings (CPE, 2013).

Tuning has allowed space for conversations of learning-focused transfer across institutions rather than transfer based on proxies for student learning.

William Evenson (2012) argues that Tuning facilitates the transfer of learning through transparency around learning outcomes, alignment of expectations across educational sectors, and the validation of non-traditional learning for credit. In Texas, the project resulted in statewide policy changes, curricular revisions, and enhanced efficiencies for credit transfer (THECB, 2014b). The statewide articulation agreements developed from the work were voluntarily adopted by 23 universities and 67 technical colleges, eliminating the need for "hundreds of institution-to-institution articulation agreements" (THEBC, 2014b, p. 1).

Tuning has also facilitated cross-institution project work focused on student learning. In Minnesota, the Graphic Design team of Alexandria Technical College (ATC) and South Central College (SCC) collaborated on student projects. One student project involved students from the technical college designing a poster and then uploading their digital files to South Central's InSite

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workflow system. Students from South Central "preflighted" the posters and eventually reproduced one of the posters on a four-color press. Another project was a large-format banner. ATC students designed a 2' x 5' banner to be output on a large-format printer at SCC. Students from both colleges gained actual experience using digital files in industry. The collaborative effort of the students working with live files and high-end equipment was mutually beneficial for the colleges and the students (Minnesota Office of Higher Education, 2010).

Expanded Conversations on Educational Redesign and Assessment

In a post-survey of Tuning participants, 67% indicated that the conversations around discipline-specific learning outcomes led to conversations about assessment, educational redesign, curriculum changes, and alternative approaches to employer engagement. Exploring the desired ends of a discipline included discussions about how to help students get there, curricular coherence, assessment of student learning, and issues of pedagogy. As a Utah participant indicated, "Tuning is a cultural change, not simply a procedural shift. It's a wonderful method for exchanging ideas, the process of trying to agree on outcomes shares information on how different people help achieve these goals."

Tuning has helped faculty members develop a student- and learning-centered view of higher education.

Evenson (2012) argues that part of the goal of Tuning is to shift the focus from what is *taught* to what is *learned*, requiring a culture shift within higher education and a greater role of assessment within the degree program. The work of Tuning led to a more student-centered and learning-focused view of the curriculum, leading faculty respondents to indicate greater use of active learning strategies and fewer lectures (Utah System of Higher Education, 2014). The final report from Utah and project evaluations indicate that faculty participants view the purposes and practices of higher education differently as a result of Tuning, changing "participants' thinking on what students should learn, how learning is facilitated for faculty and students, and ways in which learning is demonstrated" (Utah System of Higher Education, 2014, p. 13). Faculty from Kentucky and Minnesota stated they were better able to advise students to move through the curriculum intentionally and were more conscientious about aligning student assignments with expected learning (CPE, 2013; Minnesota Office of Higher Education, 2010). A faculty participant reported, "As a result of having gone through the Tuning process, I feel that I have become a more effective teacher, a better advisor, and a more articulate advocate for the importance of serious assessment practices in higher education." In addition, faculty participants across all Tuning projects reported behavior changes in pedagogy approaches, committee involvement on campus, and having more meaningful conversations with students around their learning.

The impact on assessment conversations emerging from Tuning processes can also be seen in the work of the American Historical Association's special edition of the *Journal of American History* focused exclusively on Tuning and assessment. Anne Hyde (2016) wrote that while faculty are experts at assessment within their individual classrooms, Tuning helped to force conversations on how learning adds up and is measured over several courses. Jim Grossman and Julia Brookins

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(2016) argue, "Assessment encourages history faculty to pursue intellectually rich and innovative projects that help us understand what we do (and do not do) for our students" (p. 1134). Such a lens positioned faculty to examine student learning journeys through the major, leading to better alignment of a curriculum that progressively leads students to those outcomes (Grossman & Brookins, 2016). A piece within the journal by Jeffrey McClurken and Krystyn Moon (2016) succinctly points to the ongoing impact of Tuning on assessment and education design conversations:

> As a department, we are regularly involved in conversations about the major, the skills we want students to learn, and the ways that we, as individual faculty and as a department, can help students get there. These conversations are not always easy, and we often disagree about what to do. Even so, having regular conversations informed by data from the students, being willing to pilot interventions to fix problems (and then assessing those interventions, as we did with the formal oral presentation workshop), and continually talking about what works and what does not have proved incredibly effective in meeting the university's assessment requirements and our needs as a department (p. 1131).

Student Focused and Employer Engaged

All of the Tuning projects were focused on communicating to others the learning outcomes and discipline profiles developed from the process. In a post-project survey, 44% of respondents indicated that Tuning helps students understand how their learning and degrees translate into participation in post-collegiate life. Evaluation reports of the projects claim that Tuning provides students with clearer paths through higher education by explaining up front the knowledge and skills that will qualify them for degrees along with descriptions of what the degrees represent. The focus on clear communication to students is vital, especially with those from underrepresented populations, in order to assist students to better understand the steps in their academic journey as well as what they need to demonstrate along the way. By making the design and intent of the curriculum explicit and widely and actively shared, students are no longer in a position to determine on their own how individual courses and learning experiences fit together. By mapping career pathways, students are better able to understand how their learning within a degree program translates into future careers and employment.

Tuning has made more transparent, for students and employers alike, the alignment of disciplinary learning to curriculum design and career fields.

Anne Hyde (2016) wrote of the Tuning process within the American Historical Association (AHA) as one which allowed faculty to demonstrate to students and employers why people need historians. A benefit of the Tuning projects has been just that—increased communication between employers and students on the value and benefits of different disciplines. In Minnesota (2010), the project reported increased communication between business and institutions to help orient students on what is needed by employers as well as engage the support of employers in the education of students through internships, summer jobs, and work placements (p. 3). The National Communication Association (NCA) developed materials to communicate with career services as well as administrators

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and others the value of a degree in communication (NCA, 2015a, 2015b, 2015c, 2015d). In Utah (2014), faculty reported changes in thinking about what a degree is and how degrees are framed around what students know, understand, and are able to do, providing new ways to describe to students, parents, policy makers, and employers the desired end goals of a degree program.

Degree specifications and profiles have been used by each of the projects to help advise students to better understand what the program is trying to achieve and how students will get there. Further, students have developed awareness of the value and role played by general education in relation to the major (CPE, 2013). In the classroom, Tuning participant faculty are better able to explain and demonstrate for students how what they are learning in class applies to situations they will encounter in the future, changing the way curriculum is presented and framed to students (Utah System of Higher Education, 2009). Campuses have adjusted departmental exit interviews with students to focus on learning outcomes, and faculty have successfully argued the value of their degree to a variety of skeptical employers (MHEC, 2014). As one survey participant indicated,

> Tuning seeks to define the general and specific competencies that students should acquire at various academic levels. Tuning also seeks to create appropriate evaluation mechanisms to measure how well students develop their skills. The approach is helpful for better understanding what students can do when they complete a certain degree. It is also helpful for communicating to employers what a student with a specific degree can do. Tuning is especially helpful in history because many employers are skeptical about whether a history degree prepares students for the real world. We are now equipped to explain to them exactly how it does.

Common Misconceptions and Challenges

While the work of Tuning saw many areas of success, there were several shared areas where challenges emerged. In terms of engaging with students and employers, faculty found that they had limited knowledge about where their graduates went or their careers outside of traditional academic pathways. Mapping career pathways was hindered by limited data sets and faculty that were disconnected from local or national employers. Finding students to participate in the Tuning process proved difficult for most groups and when involved, projects struggled to identify an appropriate role for students. While student voices were important, how to actively involve them was less clear. With both employers and students, Tuning participants found that focus groups proved more fruitful than surveys.

Pre-education with Tuning participants on what the process entailed was vital to the future success of the projects. Daniel McInerney (2017) wrote of the concerns that were raised in the beginning of Tuning work in the US—mainly the difficulty in describing the project and the associated language, and addressing and anticipating the objections to the work. When Tuning was first introduced in 2009, initial survey respondents indicated concerns regarding whether the Tuning process was right for the United States, what exactly it entailed, and how it did so without limiting the flexibility and diversity within individual departments. A common point of concern at the onset was that the work of Tuning was about standardization. One survey respondent stated this best in a post-survey response,

Tuning was found by participants to develop a common means for expressing what a curriculum in a discipline aims to do, but did not prescribe the means to accomplish it.

"Don't let audiences think this is simply another in a long line of ill-conceived administrative efforts trying to standardized practice. Emphasize the broad, inclusive, global nature of the conversation—and the recognition that faculty are in charge of the answers. It's a bottom-up, not top-down, approach."

Tuning was found by participants to develop a common means for expressing what a curriculum in a discipline aims to do, but did not prescribe the means to accomplish it. As Evenson (2012) states, "I think of Tuning as learning to sing in the same key but not in unison, discipline by discipline" (Evenson, 2012, p. 19). The focus on the discipline-specific learning outcomes as "reference points" helped to counter the fears of standardization of content and delivery. Neither curriculum nor pedagogy nor assessment is prescribed by Tuning. What emerged instead, are faculty agreed upon outcomes to which local departments could then align.

Finally, original project timelines were found to be constraining to the types of conversations that emerged. The cross-institution dialogues routinely took more time than expected or allotted. As one survey respondent indicated, "It must be eyeball-to-eyeball, person-to-person. The value of developing relationships with colleagues cannot be under estimated. It will take time, but it will cement a successful process and a successful outcome." Further, faculty that participated in the original Tuning process found they needed support for local implementation of the developed discipline-specific learning outcomes as well as assistance for involving adjuncts in the projects and local curricular redesign. Once the discipline-specific learning outcome documents were developed, faculty participants moved into curriculum mapping, curriculum change, and alignment within their home departments. While the Tuning process provided support for the development of discipline-specific learning outcomes, it did not provide support for local implementation of the agreed upon outcomes as part of the process (Horowitz, 2015).

Final Thoughts

Tuning has sensitized faculty to intentional educational design and helped them make the implicit explicit. Further, it has helped faculty begin to think more holistically about their disciplines, moving from content knowledge to epistemologies of the discipline (Jankowski & Marshall, 2017). Tuning created space for innovation, acknowledging that learning is about what students are able to do, not what courses they took (Evenson, 2012). As one faculty member stated, "Instead of projects that filled some administrator's file cabinet or whose results never came back to us, we focused on the embedded questions of our work as members of a discipline." By focusing on students and their learning within the context of a specific discipline, faculty have begun to consider how the different pieces of a degree come together to support students' overall learning.

In addition, faculty are now well positioned to argue for the value of their degree program to employers, administrators, students, and others outside of academia. As Evenson (2012) argues, "This work is led by the faculty and provides a defense against accountability imposed from outside the institution" (p. 23). Through the process of Tuning, faculty were able to unpack what a credential represents and share what they have in common as well as where they are different.

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While the initial Tuning projects are completed, the Tuning process is one that is never truly done. As Grossman and Brookins (2016) indicate, "…tuning has been about enabling collaboration among faculty on the deepest and most pressing issues in their teaching. In our case, we begin not by asking what we want to teach history majors, but what we want them to learn" (p. 1134). Such questions about learning require "a cyclical process of articulating values, designing mechanisms to assess our students' success in achieving the skills we identified, testing the mechanisms, adjusting as necessary and repeating" (Kroll, Neuhaus, & Gordon, 2016, p. 1109). To support the ongoing work of Tuning, the National Communications Association (NCA) has developed a series of publications and trained coaches to support local implementation efforts. In addition, both NCA and AHA support the work of Tuning through conferences, regional events, assignment charrettes and workshops. In each of these cases, Tuning has facilitated a strengthening in disciplinary culture around matters of teaching and learning.

The work of Tuning has great potential to build trust across educational sectors, help foster cohesive educational experiences, and present new ways of thinking about teaching, learning, and assessment. The greatest benefit of Tuning is the open dialogue around teaching and learning that did not exist before, one that is inclusive and intentional about involving a variety of voices. However, space and time are needed to support cross-institutional faculty conversations to help align educational systems and learning opportunities through which our students currently swirl. Such efforts not only have the potential to enhance student learning but to increase student success while positioning graduates to advocate for the value of their discipline-specific degree.

The work of Tuning has great potential to build trust across educational sectors, help foster cohesive educational experiences, and present new ways of thinking about teaching, learning, and assessment.

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Appendix A: Tuning Projects in the United States

Since 2009, eight states and two national associations have participated in Tuning initiatives, with 21 total disciplines represented. Five disciplines have been 'tuned' multiple times in different initiatives, including Biology, Business, Chemistry, Education, and History. States selected disciplines that were perceived as "high demand" for undergraduates in some cases; in other cases, states selected disciplines that were perceived to have highly regimented courses of study. In each instance, concerns regarding transfer between institutions has been a driving factor, and Tuning was seen as a means of basing transfer on actual student learning rather than proxy measures.

Pilot Initiatives (2009-10):

In 2009, Lumina Foundation convened representatives from state offices of higher education and faculty from different disciplines to introduce Tuning as a pilot project. Indiana, Minnesota, and Utah undertook the pilot initiative. Indiana undertook three disciplines, History, Chemistry, and Education, while each of the other two states 'tuned' two disciplines. In Minnesota, faculty worked on Biology and Graphic Design, while Utah faculty worked on History and Physics. Utah has since expanded initiatives to include Physics Education and Math Education as related but distinct fields of study.

Subsequent State-Based Initiatives:

Following positive responses and results of Tuning, Lumina Foundation made grants to other states to undertake Tuning initiatives. Texas, by far the most ambitious state, took up 12 disciplines between 2010 and 2012, focused on applied sciences. Convening four disciplines at a time, Texas addressed Civil Engineering, Chemical Engineering, Biomedical Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, Biology, Chemistry, Mathematics, Business, Computer Information Systems and Sciences, and Management Information Systems. Kentucky joined Texas later in 2010, tuning disciplines across a range of traditional academic divisions: Biology, Business, Education, Nursing, and a combined group from Social work and Human Services. As Texas was winding to a close, the Midwest Higher Education Compact received a grant to attempt a multi-state initiative for Marketing and Psychology which included three of its member states, Indiana, Illinois, and Missouri. Montana rounded out the state initiative by reallocating remaining grant funds to address Business.

National Association-Sponsored Initiatives:

As state-based projects continued, Lumina Foundation determined to explore the potential for Tuning at a national level through disciplinary associations. Two disciplinary associations undertook Tuning to encourage deeper reflection about teaching and learning in the discipline and as a means of fostering conversation about the meaning and value of degrees in their disciplines. Those conversations were deemed important, given the increasing pressure on higher education to demonstrate its effectiveness and value. The American Historical Association began work in 2012 and has continued its efforts consistently since, revisiting and revising the discipline core document based on those subsequent efforts. The National Communication Association undertook Tuning in 2014 and released its discipline core document in late 2015. Since then, NCA has produced support materials and is fostering work at the local level.

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NILOA Mission

NILOA's primary objective is to discover and disseminate ways that academic programs and institutions can productively use assessment data internally to inform and strengthen undergraduate education, and externally to communicate with policy makers, families and other stakeholders.

Comments and questions about this paper should be sent to:
niloa@education.illinois.edu

About NILOA

- The National Institute for Learning Outcomes Assessment (NILOA) was established in December 2008.
- NILOA is co-located at the University of Illinois and Indiana University.
- The NILOA website contains free assessment resources and can be found at http://www.learningoutcomesassessment.org/.
- The NILOA research team has scanned institutional websites, surveyed chief academic officers, and commissioned a series of occasional papers.
- NILOA's Founding Director, George Kuh, founded the National Survey for Student Engagement (NSSE).
- The other co-principal investigator for NILOA, Stanley Ikenberry, was president of the University of Illinois from 1979 to 1995 and of the American Council of Education from 1996 to 2001.

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