

National Institute for Learning Outcomes Assessment

July 2012

Using Assessment Results: Promising Practices of Institutions That Do It Well

Gianina R. Baker, Natasha A. Jankowski, Staci Provezis & Jillian Kinzie



knowledge accountability connection self-reflection
intellect curiosity challenge create achievement
success ingenuity intellect curiosity challenge k
ingenuity self-reflection educate action underst
curiosity challenge create achievement connect
connection self-reflection educate action u
educate innovation success ingenuity intel
understand communicate curiosity challen
action understand communicate listen lea
challenge knowledge accountability
ingenuity self-reflection educate acti
accountability connection self-reflec
challenge connection knowledge acc
success ingenuity challenge create achievement connection self-reflection educate action understand connection self-reflection understand commu
listen learn access quality action create achievement connection self-reflection educate action understand communicate listen learn access quality
success educate action communicate listen learn access quality action educate action understand communicate educate innovation success self-ref
knowledge accountability communicate listen learn achievement connection self-reflection educate action understand communicate listen learn acc
innovation success ingenuity intellect access quality innovation success self-reflection curiosity challenge create achievement connection self-reflec
understand educate action understand communicate listen learn action understand communicate listen learn access quality innovation success inge
curiosity challenge create achievement connection self-reflection understand communicate listen learn access quality action create achievement connect
self-reflection educate action understand communicate listen learn access quality innovation success educate action communicate listen learn access

Table of Contents

ABSTRACT . . . 3

Using Assessment Results: Promising Practices of Institutions That Do It Well . . . 4

Introduction . . . 4

Effective Assessment: A Consideration of Principles . . . 5

Institutional Framing of Assessment . . . 6

Using Student Learning Evidence to Improve . . . 9

Conclusion . . . 11

REFLECTIVE QUESTIONS AND RESOURCES . . . 12

APPENDIX A

Methodology . . . 14

APPENDIX B

Annotated Case Study List . . . 15

REFERENCES . . . 17

NILOA

National Advisory Panel . . . 18

About NILOA . . . 19

NILOA Staff . . . 19

NILOA Sponsors . . . 19

“Now, assessment has a positive influence on teaching and student learning. The emphasis has shifted from assessment as our duty, to assessment as a meaningful way to reflect on our work, and provide feedback on faculty and student performance.”

-- Faculty Member, History, Colorado State University

This project would not have been possible without the cooperation of the participating case study institutions which provided information about their assessment activities and use of student learning evidence summarized in this report. We are grateful for their engagement and dialogue.

intellect curiosity challenge create achievement connection se
innovation success ingenuity intellect curiosity challenge knowle
innovation success ingenuity self-reflection educate action unde
understand communicate curiosity challenge create achievement
reflection knowledge accountability connection self-reflection edi
ingenuity intellect curiosity challenge educate innovation success
connection self-reflection educate action understand communic
communicate listen learn access quality action educate action und

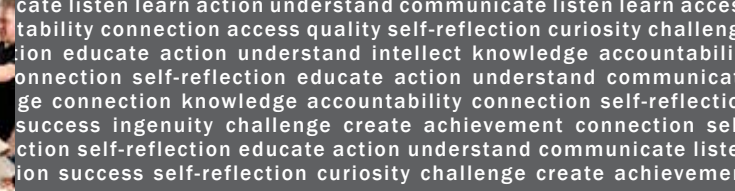
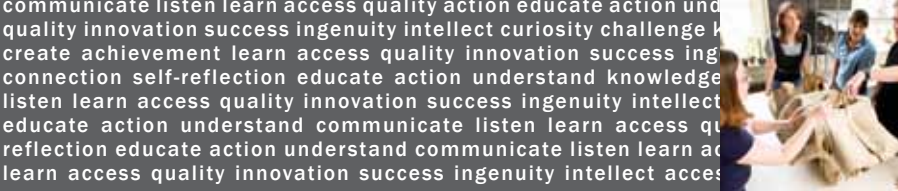


ate action understand communicate listen learn access quali
ty connection understand communicate listen learn access quali
knowledge accountability connection self-reflection educate actio
reflection curiosity challenge create achievement connection sel
rstand communicate listen learn access quality innovation succes
t curiosity challenge create achievement knowledge accountability
allenge create achievement connection self-reflection understand
cate listen learn action understand communicate listen learn acces

Abstract

Using Assessment Results: Promising Practices of Institutions That Do It Well

Most institutions are collecting evidence of student learning, but it is not clear how these results are being used to improve student outcomes. To learn more about what colleges and universities are doing to use assessment data productively to inform and strengthen undergraduate education, the National Institute for Learning Outcomes Assessment conducted nine case studies. This report synthesizes the insights from these individual studies to discern promising practices in using information about student learning. Institutional behavior appears to be generally consistent with the Principles of Effective Assessment Practice identified by Banta and Associates (2002). For example, the case study institutions took advantage of calls for accountability to leverage internal improvement efforts, communicated widely about assessment efforts and results, and took time to reflect on their assessment activities and results. Equally important, the case study institutions aligned their assessment work with organizational structures and cultures, and focused their assessment efforts on specific problems or questions. The report concludes with lessons learned and reflective questions to help institutions advance their own assessment efforts within their specific institutional contexts.



Using Assessment Results: Promising Practices of Institutions That Do It Well

Introduction

Expectations for accreditation and external accountability are increasing, so that it is no longer sufficient for institutions to have assessment plans. Instead, institutions strive to build a culture of evidence with examples of how assessment results are used to improve student learning. Very seldom do institutions now complete their reaccreditation without including language about work that needs to be done regarding the collection of student learning outcomes assessment evidence and using that evidence to improve (Provezis, 2010). Understanding how colleges and universities use assessment data is a goal of the National Institute for Learning Outcomes Assessment (NILOA). NILOA's first study, a national survey of chief academic officers, found that while most assessment data were typically used for accreditation, these data were also used to some degree for improvement (Kuh & Ikenberry, 2009). Even so, time and again during our focus groups and presentations, participants wanted to know how institutions use assessment information, how such use is operationalized, and in particular how institutions are using assessment evidence to improve student learning and “to close the assessment loop.” Questions about using assessment results keep coming as institutions seek to embed assessment activities and the use of assessment results into institutional processes for both accreditation and improvement.

To learn more about how institutions productively use assessment data to inform and strengthen undergraduate education, NILOA conducted nine short case studies, titled *Examples of Good Assessment Practice* (<http://www.learningoutcomeassessment.org/Case-Studies>), documenting use of assessment evidence at selected two- and four-year institutions. Throughout the remainder of this report, we will refer to these as case studies or case study sites/institutions. These case studies highlight the use of assessment data for improvement and decision making. Institutions were selected for case study based on their robust assessment processes and their history of demonstrating the use of assessment evidence. The pool of institutions considered for these case studies were generated from NILOA's National Advisory Panel member nominations, the Council for Higher Education Accreditation (CHEA) award nominees, and NILOA's research regarding assessment practice in the field, particularly the NILOA's webscan research (see Jankowski & Provezis, 2011). Efforts were also taken to assure representation of different institution types and regional accreditors. To gather evidence for these case studies, NILOA researchers conducted phone interviews, analyzed institution websites, and reviewed relevant documents pertaining to assessment on campus. Appendix A presents additional information on the methods and institution selection process, and Appendix B briefly outlines the nine case studies.

More than a few resources exist that document effective assessment practice (Banta & Associates, 2002; Banta, Jones & Black, 2009; Bresciani, 2007). NILOA's purpose with the case studies was to add to and support existing work with a particular focus on examining how institutions are using evidence to advance improvements in student learning. In their NILOA Occasional Paper (<http://www.learningoutcomeassessment.org/occasional-paper-eight.htm>), Blach and Wise (2011) discussed the challenge colleges and universities experience moving from gathering assessment results to actually using the results. Putting an even finer point on the challenge, “closing the loop”—using assessment evidence to improve student learning and inform curriculum decisions—is more difficult (Banta & Blach, 2011). After scouring the literature, talking with colleagues, and consid-

Case Study Institutions:

Augustana College

Capella University

Carnegie Mellon University

Colorado State University

Juniata College

LaGuardia Community College

North Carolina A&T State University

St. Olaf College

Texas A&M International University

ering their own work, Banta and Blaich concluded they could only identify a few examples in which the use of assessment findings actually resulted in improved student learning. In fact, among the 146 profiles of good practice submitted for inclusion in Banta, Jones, and Black's (2009) *Designing Effective Assessment*, only six percent contained evidence that student learning had improved (Banta & Blaich, 2011).

The nine NILOA case studies offer rich, in-depth examinations of institutional assessment practices that address the challenge of using evidence to improve student learning. Each institution approached this challenge somewhat differently, in part reflecting different missions and cultures. At the same time, the case study institutions shared a common approach to conducting assessment and using student learning outcomes assessment data. Although each institution has distinct lessons for practice, in this report we look across the case studies to identify unique approaches, explore similarities and differences, tease out common challenges and solutions, and consider practices in relation to stated principles of effective assessment practice. The report concludes with lessons learned and reflective questions to help institutions advance their own assessment efforts within their specific institutional contexts.

The nine NILOA case studies offer rich, in-depth examinations of institutional assessment practices that address the challenge of using evidence to improve student learning.

Effective Assessment: A Consideration of Principles

The literature guiding assessment in higher education—including Banta and Associates' *Principles of Effective Assessment Practice* (2002), the American Association for Higher Education's *Principles of Good Practice for Assessing Student Learning* (1992), and the New Leadership Alliance's *Committing to Quality Guidelines* (2012)—outlines specific principles for effective assessment practice. In general, the assessment practices and processes across the nine case study sites were consistent with recommendations from these sources. Practices at the case study sites that were most in alignment with the assessment principles included the following:

- Embedding assessment into institutional processes such as program review or governance structures;
- Securing support from administrative leadership by
 - making resources available for and supporting the professional development of faculty and staff
 - providing a vision for assessment
 - providing and encouraging space for discussion and collaboration
- Engaging faculty in and fostering ownership of assessment
- Sharing information widely regarding assessment and results of assessment to both internal and external audiences.

These assessment practices are particularly well demonstrated in the Colorado State University case study (<http://www.learningoutcomeassessment.org/ColoradoStateCaseStudy.html>), which depicts CSU's use of PRISM, an online planning infrastructure to support continuous improvement efforts by providing the university community and external constituents access to assessment data organized around specific questions of interest. PRISM allows for entry points customized by audience to highlight assessment results that may be of specific interest to constituent groups including alumni, faculty, students, families, and employers. Examples of case study institutions from other sectors communicating assessment results to a variety of audiences include a for-profit institution, Capella University (<http://www.learningoutcomeassessment.org/CaseStudyCapellaU.html>), and Augustana College, a liberal arts college (<http://www.learningoutcomeassessment.org/AugustanaCaseStudy.html>).

Institutional representatives outlined the need for additional growth or next steps for the institution's assessment efforts to fully realize the well-regarded principles. Each case study site was committed to continuing to improve its assessment efforts through ongoing fine tuning of their framing of assessment toward a common understanding of the ways assessment can be useful. In addition, each case study site focused on the need to more effectively review assessment systems and assessment results. Overall, the sites felt that while they were pleased with their assessment efforts so far, they still had areas in which they could improve.

Additional principles mentioned by case study sites representing areas in which the sites hoped to grow included

- *Engaging more stakeholders.* Most case study sites considered themselves to be in the preliminary stages of fully engaging a variety of stakeholders in their assessment practices. For instance, Augustana College was striving to involve more faculty, while Texas A&M International University hoped to engage their surrounding community.
- *Establishing more robust assessment of assessment processes* or utilizing the already collected assessment data more effectively. For example, Capella University has examined the role of action analytics in furthering assessment processes.
- *Becoming more transparent* with assessment processes and results and with sharing promising practices externally. North Carolina A&T State University's desire to communicate to students and the higher education community at large led to opportunities for student involvement in assessment through the Wabash Provost Scholars Program.

All of the case study sites saw room for improvement in their assessment efforts and none felt that they had yet "arrived." They recognized that assessment is an ongoing process in which closing the assessment loop begins the assessment process anew. Several institution representatives echoed the continual nature of the process of assessing student learning, indicating they did not see their work with assessment as complete but rather as continuing to evolve. They were not satisfied with current assessment results and wanted to learn more about their students in order to improve student learning.

The remainder of this report focuses on assessment practices at the case study sites that differ from or expand on the above-mentioned principles of assessment. Our examination revealed two central features across the case study institutions in regards to effective assessment practices related to enhanced use. First, the institutions framed their work so as to align it with organizational structures and cultures. Second, they focused assessment efforts on increasing the use of evidence in the exploration of institutional processes and educational practices to improve student learning.

Institutional Framing of Assessment

The case study institutions' operationalization and implementation of assessment processes and practices illustrate principles of effective assessment practice. However, unique to these examples is the way in which the institution representatives talked about and approached assessment work on their campuses. Representatives from each institution discussed the importance of assessment to their campuses and their students, paying particular attention to institutional cultures and histories of assessment. The case study institutions took the needed time to build their assessment efforts bit by bit over a number of years, working toward collective understandings of what the assessment of

Our examination revealed two central features across the case study institutions in regards to effective assessment practices related to enhanced use. First, the institutions framed their work so as to align it with organizational structures and cultures. Second, they focused assessment efforts on increasing the use of evidence in the exploration of institutional processes and educational practices to improve student learning.

student learning meant for that institution. Support from various foundations (such as The Teagle Foundation and the Association of American Colleges and Universities) helped to catapult certain assessment activities on campuses. Examples of institutions involved in such processes include LaGuardia Community College (<http://www.learningoutcomeassessment.org/CaseStudyLaGuardiaCC.html>), where a Title V grant helped launch the nationally recognized ePortfolio system; Texas A&M International University, where the Institute for Higher Education Policy's BEAMS Project helped inform the institution's current Quality Enhancement Plan; and Juniata College, where the development of the SoTL Center, with Teagle Foundation funds, has engaged faculty in assessment.

Initial involvement in assessment efforts at some of the case study sites began in the early 1990s, with each encountering roadblocks along the way. The case study sites acknowledged that the process of conducting assessment and inculcating a culture of evidence involved many challenges. The case study site representatives were realistic and candid about what would or would not work within their institutions and claimed that their assessment systems were built on their campuses' strengths and interests. For example, St. Olaf College (<http://www.learningoutcomeassessment.org/CaseStudyStOlaf.html>) framed its assessment work around "inquiry in support of student learning" and focused on assessment that is "meaningful, manageable, and mission driven." Inquiry allowed faculty to lead assessment efforts by bringing their disciplinary scholarship to bear on student learning questions of interest to them. Further, focusing on meaningful, manageable, and mission-driven assessment reinforced to those within the institution that assessment was an activity undertaken to improve student learning and not to unduly infringe upon or add to faculty and staff responsibility.

In another example, Texas A&M International University (<http://www.learningoutcomeassessment.org/CaseStudyTAMIU.html>) based its assessment efforts on a "best practice, best fit" approach that involved adapting assessment literature or assessment processes to their specific student population. Texas A&M International University focused on how best to assess its student population in meaningful ways with activities and tools addressing the specific needs of students and the institution, such as the large population of first-generation students.

The case study sites celebrated successes and shared best practices across their campuses and, by doing so, involved a variety of faculty, staff, students, and administrators in assessment efforts. By starting with small, manageable pieces of assessment and working overtime to involve their entire campus communities, these case study institutions built robust assessment systems and fostered cultures of inquiry, such as at North Carolina A&T State University, a historically black, land-grant university (<http://www.learningoutcomeassessment.org/CaseStudyNCAT.html>) and Juniata College, a private liberal arts institution (<http://www.learningoutcomeassessment.org/JuniataCaseStudy.html>).

Although most institutions have proceeded to plan, implement, improve, and sustain effective assessment on their campuses, relatively few have had the opportunity to discuss their approaches to assessment, the potential impact of assessment on student learning at their campus, and what the results mean for improvement. Several of the case study sites were further along toward these goals, and all were working to advance their practice around the following four activities: focusing assessment efforts, harnessing accountability for internal improvement, communicating widely about assessment, and allowing time for internal stakeholders to make meaning of and to reflect on assessment results.

Focusing Assessment Efforts. Case study sites focused assessment efforts on specific problems or questions regarding student learning, emphasizing what was of most interest to faculty members.

All institutions were working to advance their practice around the following four activities:

- 1. Focusing assessment efforts*
- 2. Harnessing accountability for internal improvement*
- 3. Communicating widely about assessment*
- 4. Allowing time for internal stakeholders to make meaning of and to reflect on assessment results.*

Focusing on the interests and questions of faculty members helped to achieve faculty engagement with and greater faculty ownership of assessment efforts, as well as to create a culture of inquiry for the range of interested parties involved. Carnegie Mellon University (<http://www.learningoutcomeassessment.org/CaseStudyCarnegieMellon.html>), for example, values and fosters diversity in how student learning outcomes assessment is undertaken within colleges and departments. Assessment at Carnegie Mellon is driven by the questions raised by faculty about student learning and effective teaching and is informed by departmental curricular interests, program goals, and the particular discipline. By focusing on what is motivating faculty interest in assessment and emphasizing this in the promotion of assessment activities, assessment centers on issues of teaching and learning and, thus, is more closely tied to faculty work. For additional examples of focusing assessment, see Juniata College (<http://www.learningoutcomeassessment.org/JuniataCas-eStudy.html>) and North Carolina A&T State University (<http://www.learningoutcomeassessment.org/CaseStudyNCAT.html>).

Harnessing Accountability for Internal Improvement. Most of the case study institutions began doing their assessment work in response to requirements for accreditation. However, at some point, most made an important shift to intentionally embed assessment into their institutional culture and, specifically, their institutional planning and improvement efforts. Thus, assessment was no longer just to satisfy accreditation and accountability mandates. For instance, Augustana College began to implement its assessment plan as a result of accreditation requirements by collecting data across campus and sharing a report with faculty during a retreat. The faculty discussed the report with the view that while the findings were acceptable, the institution could do much better. To that end, they formed 20 study groups, involving many faculty, to examine (in other words, to assess) various aspects of the college. The accreditation report served as a catalyst for this effort, but it was the investment of many faculty in study groups focused on meaningful improvement that helped most to advance their assessment activities. For additional examples of harnessing external accountability for improvement purposes, see Capella University (<http://www.learningoutcomeassessment.org/CaseStudyCapellaU.html>), Carnegie Mellon University (<http://www.learningoutcomeassessment.org/CaseStudyCarnegieMellon.html>), and Texas A&M International University (<http://www.learningoutcomesassessment.org/CaseStudyTAMIU.html>).

Communicating Widely. Many of the case study institutions feature assessment results widely on their websites. Some share success stories of departments and programs doing assessment well while others communicate results externally to multiple audiences. For instance, Augustana College featured “The Stats and Their Stories” on its homepage, with links to assessment data. St. Olaf College posted a video of its president speaking about the college’s assessment efforts for friends of the college, and uses several different means on its website to disseminate assessment results to multiple audiences including students, faculty, and staff. These and other case study institutions use the Internet to share assessment information with external and internal audiences. Colorado State’s PRISM system, for example, is intentionally designed to be accessible to external visitors but also has a login for faculty and staff. The Internet is not the only place where these successful campuses communicate about assessment. Many of them share assessment data in faculty meetings. At LaGuardia Community College, individual units share assessment strategies and results.

Most of the case study institutions began doing their assessment work in response to requirements for accreditation. However, most made an important shift to intentionally embed assessment into their institutional culture and, specifically, their institutional planning and improvement efforts.

At North Carolina A&T State University, the chancellor often shares college-wide assessment results during faculty and staff institutes. Augustana College, too, has taken advantage of cross-campus faculty meetings as an avenue for sharing assessment data as well as featuring units that were successful. St. Olaf dedicated an entire year to reflection in order to discuss assessment results and involved students in the assessment process through participation on campus committees and in the presentation of results. North Carolina A&T State University engaged students in the assessment process as well by allowing them to lead focus groups, participate in data analysis, and present results at various conferences. By sharing information, the campuses were embedding assessment into their culture and showing others on campus how the efforts are used to inform practice.

Making Meaning and Reflection. An important stage in the assessment cycle that is often glossed over is that of reflection on results or evidence of student learning. Representatives of several of the case study institutions talked about taking time to reflect on assessment results before implementing changes and also after changes were made to consider what had occurred and if the implemented changes based on the collected assessment data had been successful. While time for reflection on the results and on determining the aspects of teaching and learning to change varied by institution, our case study institutions were committed to this reflection and valued the time spent and the chance to make shared meaning of the data. For instance, LaGuardia Community College (<http://www.learningoutcomeassessment.org/CaseStudy-LaGuardiaCC.html>) has been a leader in the area of ePortfolios for a decade and has a well-established process for assessing student artifacts in portfolios. Even so, the institution takes time to review this process and consider new projects. For example, after concluding its “Benchmark Assessment Readings” study in which faculty from a variety of programs read samples of student work to evaluate the rubrics used, LaGuardia Community College decided to look more comprehensively at student growth and learning. For additional examples of reflecting on results as a vital part of the assessment process, see St. Olaf College (<http://www.learningoutcomeassessment.org/CaseStudyStOlaf.html>).

While time for reflection on the results and on determining the aspects of teaching and learning to change varied by institution, our case study institutions were committed to this reflection and valued the time spent and the chance to make shared meaning of the data.

Using Student Learning Evidence to Improve

The case study institutions had robust systems for both assessing student learning and using the evidence gained from assessment. The individual case study reports offer a comprehensive account of how these institutions use evidence to improve student learning at the course, program, and institution levels. A review of examples of use across the case study institutions illustrates two distinct levels of use—institution level and program level. Examples of the types of uses for each are presented below. Uses of student learning evidence for institution-level improvement include

- Setting institutional priorities and strategic planning
- Informing institutional decision making
- Incorporating results into accreditation efforts
- Framing assessment at the institution level
- Revising institutional outcomes
- Improving student engagement and success

- Creating a culture of teaching and learning
- Enhancing faculty collaboration across campus
- Reflecting on assessment processes and institutional practices

Uses of student learning evidence for program- and classroom-level improvement include

- Setting faculty priorities
- Securing resources for professional development
- Improving student support services
- Revising curriculum, courses, and assignments
- Informing program reviews/departmental self-studies
- Aligning curriculum
- Improving program outcomes

Blaich and Wise (2011) define “use of student learning evidence” as having five steps that help institutions identify effective assessment processes and the use of this data. These steps include data auditing; engaging faculty, staff, and students to converse and devise a plan before collecting assessment data in preparation for reflection; securing resources (money, space, time, etc.) to encourage regular inter-institutional collaboration for dialogue regarding the data; focusing assessment efforts on one or two evidence-based outcomes; and encouraging student involvement with the assessment data to assist in the interpretation of results. As one might imagine, incorporating all these pieces into the assessment process can prove difficult; yet a similarity among the case study institutions was the recognition by each that using evidence of student learning is a time-intensive process involving opportunities for reflection and requiring a space for discussion and shared understanding of what results mean for the institution and student learning.

Having a framework or a goal regarding the use of evidence at the onset of the assessment process was a distinct approach employed at several case study sites to prioritize use of assessment results. Capella University (<http://www.learningoutcomeassessment.org/CaseStudyCapellaU.html>) focused on a backwards-design approach to outcomes assessment. By starting with outcomes and building an aligned curriculum and program to achieve those outcomes from course assignments through to program completion, faculty better understood and were positioned to use assessment results to make changes in the curriculum to enhance student learning. Further, establishing set times to reflect on the results of assessment, such as St. Olaf College’s year of reflection built into the assessment cycle, allowed for collected data to be examined for use in improving learning. Juniata College focused on the time and space required for thoughtful analysis of assessment results prior to the actual use of those results to improve student learning through its Center for the Scholarship of Teaching and Learning. Center staff asked faculty to examine literature, a variety of evidence of student learning, and their own experiences to support evidence-based teaching to improve student learning.

The case study sites worked diligently over time to create structures, processes, and atmospheres conducive to the use of assessment to improve student learning. The incorporation of the principles of assessment—such as gaining leadership support, cultivating interested and engaged faculty and students, and administering a variety of approaches to measurement—were necessary but not sufficient for use to occur. There was no formula that led to the use of evidence of student learning, as the process of use was often complex, involved multiple actors and the integration of multiple sources of evidence from across

A similarity among the case study institutions was the recognition by each that using evidence of student learning is a time-intensive process involving opportunities for reflection and requiring a space for discussion and shared understanding of what results mean for the institution and student learning.

the institution, built on institutional understanding of students and assessment developed over several years, and required multiple discussions about the meaning of the results for the institution and student learning. Deciding on what to change to improve student learning often involved examining a variety of evidence, incorporated curriculum mapping, utilized gap analysis, and generally culminated in adding more assignments to courses and/or altering or revising course sequences.

The commonalities across the case study sites was not how institutions used evidence of student learning. Instead, it was the desire to improve student learning and to critically examine institutional processes and practices—from the classroom to extracurricular activities and everything in between—to inform decisions to enhance student learning. All of the institutions could provide examples of the use of assessment results to improve student learning ranging from the classroom to the program to general education in institution-wide educational practices that cut across the curriculum, such as student writing. Indeed, these case study sites were selected because of their advanced use of assessment data. Yet, despite their heightened use of evidence to improve student learning, respondents were self-critical about the need to do more to enhance their use of assessment results for a still greater impact on policy, processes, or institutional change. While the institution respondents provided examples of the use of assessment results in their day-to-day practice, colleges with clear avenues for communicating about assessment were more able to provide examples of use than those without such mechanisms. These points demonstrate two key elements: 1) more use of assessment results may be taking place than is known; and 2) a transparent system is needed to communicate how assessment evidence is being used and to share institutional examples internally and externally.

The commonalities across the case study sites was not how institutions used evidence of student learning. Instead, it was the desire to improve student learning and to critically examine institutional processes and practices from the classroom to extracurricular activities and everything in between to inform decisions to enhance student learning.

Conclusion

The examples of good assessment practice, represented in these case studies, reinforce established effective assessment principles. They also show how to use evidence of student learning effectively and how to sustain assessment processes. In addition, these case studies suggest some important lessons about how campuses can advance their assessment efforts in ways consistent with their institutional cultures. Further, representing important institutional achievements in the assessment of student learning outcomes, these case studies highlight promising practices for using assessment data for improvement and decision making, and exemplify assessment's meaningful contributions to strengthening student learning.

The following reflective questions serve as starting points for conversations on how to advance assessment efforts. Supplementing these questions are lessons learned from the case study institutions as well as NILOA resources that can help guide the development of good assessment practices to support improvements to student learning.

A campus can take stock of its assessment practices by reflecting on these questions and the recommendations for effective assessment practice. Consulting the suggested resources and digging into the specific institution case studies referenced in this report may prompt additional consideration of next steps in advancing the use of assessment data to inform and strengthen undergraduate education. This work is not easy and there are no simple steps that automatically lead to effective assessment processes. However, if the process is grounded in a desire to improve student learning and a willingness to examine institutional practice, student learning and institutional effectiveness will benefit. A key first step is taking the time to discuss and reflect on assessment practices within the institution to build a comprehensive, collective approach to assessing student learning.

Reflective Questions and Resources

What does assessment mean to our institution based on our history, values, mission, educational priorities, and student population?

- For effective assessment, build an understanding of students and their needs, the campus context, and the institution's educational and assessment goals.
- Across the institution, build a collective understanding of assessment and respect departmental approaches. To build a shared understanding, assessment should involve multiple actors across the institution as opposed to being designated the responsibility of an individual or single office.

When selecting measures to reflect institutional priorities, goals, and student population, see the assessment resource, *Measuring Quality in Higher Education: An Inventory of Instruments, Tools, and Resources* (<http://www.learningoutcomeassessment.org/MeasuringQuality.html>), and the NILOA Occasional Paper, *Three Promising Alternatives for Assessing College Students' Knowledge and Skills* by Trudy Banta, Merilee Griffin, Teresa Flateby and Susan Kahn (<http://www.learningoutcomeassessment.org/occasionalpapertwo.htm>).

Who is currently involved in and engaged with assessing student learning, and who needs to be involved in and engaged with this work?

- Involve many campus constituents in conversations about assessment activities and results, including faculty, administrators, and students. Strive to make assessment activity regular, routine, continuous, and connected to valued practices in departments and units. Embed assessment into other campus review systems so that assessment activities are done regularly and revisited during the next cycle.
- Create a group of campus assessment experts or champions made up of faculty and staff from throughout the campus, as well as top administrators, to monitor assessment plans and program reviews and to become the campus experts on assessment.

For resources on engaging faculty, see the NILOA Occasional Paper by Pat Hutchings, *Opening Doors to Faculty Involvement in Assessment* (<https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/OccasionalPaper4.pdf>), and the faculty assessment brief by Pat Hutchings, *What Faculty Need to Know About Assessment* (<http://www.learningoutcomesassessment.org/ABfaculty.htm>). For resources on involving student affairs, see the NILOA assessment brief by Marilee Bresciani, *Making Assessment Meaningful: What New Student Affairs Professionals and Those New to Assessment Need to Know* (<http://www.learningoutcomeassessment.org/ABstudentaffairs.htm>), and the NILOA Occasional Paper by John Schuh and Ann Gansemer-Topf, *The Role of Student Affairs in Student Learning Assessment* (<http://www.learningoutcomeassessment.org/occasionalpaperseven.htm>).

What resources are available and what resources are needed to move our assessment work forward?

- Develop the requisite infrastructure and processes necessary for institution-wide learning outcomes assessment and recognize that this takes time, requires resources, and the involvement of many different groups throughout the institution.
- Provide administrative support for an assessment vision and strive to continually assess student learning across the institution by providing professional development opportunities for faculty and staff.

For additional information, see NILOA Occasional Papers by Jane Wellman, *Connecting the Dots Between Learning and Resources* (<http://www.learningoutcomeassessment.org/occasionalpaperthree.htm>), and by Randy Swing and Christopher Coogan, *Valuing Assessment: Cost-Benefit Considerations* (<http://www.learningoutcomeassessment.org/occasionalpaperfive.htm>).

How do internal stakeholders view assessment of student learning? How are examples of good assessment practice shared?

- To promote assessment activities, emphasize that assessment is a kind of scholarly inquiry, as featured in the literature on the scholarship of teaching and learning, and identify what most interests faculty in assessment.
- Encourage programs to learn from each other—evidence from one program might be a starting point for another. Advance this connection and encourage those involved with assessment to exchange ideas about creative approaches to conducting assessment.

For additional resources on program-level assessment, see the NILOA report by Peter Ewell, Karen Paulson and Jillian Kinzie, *Down and In: Assessment Practices at the Program Level* (<http://www.learningoutcomeassessment.org/Down-AndIn.htm>). For internal views on assessment, see the NILOA report by Jillian Kinzie, *Perspectives from Campus Leaders on the Current State of Student Learning Outcomes Assessment: NILOA Focus Group Summary 2009–2010* (<http://www.learningoutcomeassessment.org/Perspectives.htm>).

How do our external stakeholders view assessment of student learning? How is this view similar to or different from our own institutional views?

- To move from an assessment agenda focused on accountability to one focused on improvement requires opportunities to make sense of data collaboratively through structured support experiences that allow those interested in assessment to dig deeper into the results and to create processes, policies, and pedagogies to improve student learning outcomes.
- Use regional and program accreditation to help facilitate ongoing, internal, continuous improvement of student learning and assessment processes. Leverage existing state-mandated or institutional structures to stimulate assessment.

Additional information on accreditation may be found in the NILOA Occasional Paper by Staci Provezis, *Regional Accreditation and Student Learning Outcomes: Mapping the Territory* (<http://www.learningoutcomeassessment.org/occasionalpapersix.htm>). For the state policy role in assessment, see the NILOA Occasional Paper by Peter Ewell, Natasha Jankowski and Staci Provezis, *Connecting State Policies on Assessment with Institutional Assessment Activity*.

How are results communicated and to whom? Are there opportunities to reflect on and make sense of results from assessment?

- Reflection and time are vital parts of any assessment process. Time and space are needed to review accomplishments, and the thoughtful analysis of assessment information is best done prior to making changes or improvements that evolve from actionable items.
- Share assessment information openly with faculty at retreats and with all stakeholders through an easily accessible website.

Useful resources when considering ways to communicate assessment information, results, and uses are the NILOA Transparency Framework (<https://www.learningoutcomesassessment.org/ourwork/transparency-framework/>) and the NILOA report by Natasha Jankowski and Staci Provezis, *Making Student Learning Evidence Transparent: The State of the Art* (<https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/TransparencyOfEvidence.pdf>).

How effective are our assessment processes in meeting desired institutional and program goals?

- Assess your assessment activities. Do not allow your assessment process to become stagnant. Regularly review your assessment materials and create small, manageable assessment projects that can showcase the fruits of these labors to encourage larger scale projects.
- Being intentional about the potential uses from the beginning of assessment efforts leads to enhanced use of assessment results and more effective assessment processes.

For resources on using assessment results, see the NILOA Occasional Paper by Charlie Blaich and Kathleen Wise, *From Gathering to Using Assessment Results: Lessons from the Wabash National Study* (<https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/OccasionalPaper8.pdf>). For engaging the many roles of institutional research in assessment, see the NILOA Occasional Paper by J. Fredericks Volkwein, *Gaining Ground: The Role of Institutional Research in Assessment Student Outcomes and Demonstrating Institutional Effectiveness* (<https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/OccasionalPaper11.pdf>).

Appendix A: Methodology

Case study institutions were selected from NILOA's National Advisory Panel member institution recommendations, CHEA award winners, and institutions identified in NILOA's research with institutions in the field. NILOA strove to include a variety of institution types, regional accreditation regions, and institutions that had not been previously included in other case study research.

For the selected case study institutions, the data collection process included a thorough examination of the institution's website and relevant assessment documents (accreditation self-studies, assessment reports, program reviews, etc.) and phone interviews with key institution representatives. An abbreviated version of the webscan methodology used for a previous NILOA project was employed to examine institution websites (for additional information on the webscan method see <https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/WebScanReport.pdf>). Once an institution was identified as a potential case study site, an email was sent to the provost inviting the institution to participate. If the provost responded affirmatively, an email was then sent to schedule a preliminary interview and designate an institution representative. The institution representative helped facilitate the selection of additional interview respondents and provided materials related to the assessment of student learning and the use of assessment results on the campus. NILOA researchers also identified those most likely involved with assessment efforts on campus (such as Director of Institutional Research or chair of Assessment Subcommittee) and requested to include them in the interview process. Efforts were also made to include student voices in the case study interviews.

Each participant was emailed information about the project and asked to take part in a 60-minute phone interview. A semi-structured list of questions was used to guide the conversations with each respondent. The questions focused on a variety of topics such as campus assessment activities; faculty, staff, and administrative engagement and their roles in student learning outcomes assessment on campus; the use of student learning outcomes and assessment results; and possible enhanced future uses of assessment results. The interviews were recorded using LiveScribe audio recording software with permission of the participants both by audio consent and by signed informed consent forms. NILOA researchers analyzed the interview data and wrote up individual case study reports. Once the individual draft case studies were complete, they were sent electronically to the respective case study institutions and interview respondents for the purposes of member checking and review. Institutions provided feedback on their draft case study and also updated NILOA staff regarding new developments in their assessment work. Final case study reports were released in the NILOA newsletter and posted on the NILOA website at <https://www.learningoutcomesassessment.org/case-studies/>.

Appendix B: Annotated Case Study List

Augustana College

Over the last six years, Augustana College has been actively assessing student learning and has become a leader in gaining faculty involvement in this area. This involvement, due in part to the college's institutional type, focuses on teaching and learning, the dynamic role of the Assessment Review Committee, and communication strategies. Based on these assessment activities, Augustana has made several improvements on campus.

- Provezis, S. (2011, July). *Augustana College: An assessment review committee's role in engaging faculty* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/AugustanaCollegeCaseStudy.pdf>

Capella University

Capella University was selected as a case study due to its systematic, embedded student learning outcomes assessment process; its administrative support and vision of what assessment can do for individual learners; its transparency efforts such as Capella Results, which publicizes assessment results; its help in developing Transparency By Design; and its use of assessment results to enhance learner success levels.

- Jankowski, N. (2011, August). *Capella University: An outcomes-based institution* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/CapellaUniversityCaseStudy.pdf>

Carnegie Mellon University

This case study describes broadly Carnegie Mellon University's (CMU) approach to addressing the challenges of assessment, explores the salient elements of CMU's culture for assessment and improvement, and then focuses on the positioning and role of the Eberly Center for Teaching Excellence in student learning outcomes assessment at CMU. Three elements have been instrumental in CMU's advances in program-level student learning outcomes assessment: 1) an institutionalized research-oriented and data-informed university decision-making process driven by deans and departments; 2) an organizational culture with established processes promoting continuous improvement; and 3) the elevation of a cross-campus faculty resource—the Eberly Center for Teaching Excellence—as the hub of assessment support.

- Kinzie, J. (2012, June). *Carnegie Mellon University: Fostering assessment for improvement and teaching excellence* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/CarnegieMellonCaseStudy.pdf>

Colorado State University

Colorado State University's (CSU) innovative learning outcomes assessment and institutional improvement activities have been highlighted in various publications. CSU's assessment effort in student affairs is a model for bridging the work of academic affairs and student affairs through student learning outcomes assessment. Over the last dozen years, CSU has expanded its continuous improvement system for managing information sharing to serve the decision making and reporting needs of various audiences. This system—known as the CSU Plan for Researching Improvement and Supporting Mission, or PRISM—provides information on the university's performance in prioritized areas, uses a peer review system for feedback, and emphasizes the importance of documenting institutional improvements informed by assessment results.

- Kinzie, J. (2011, August). *Colorado State University: A comprehensive continuous improvement system* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/ColoradoStateUniversity.pdf>

Juniata College

Juniata College was identified as an example of good assessment practice for the faculty-led Center for the Scholarship of Teaching and Learning (SoTL Center) that champions and supports evidence-based teaching; an administration-supported accountability website that provides data and information about outcomes to multiple audiences; and the use of evidence of student learning to make improvements at the institution and individual course levels.

- Jankowski, N. (2011, July). *Juniata College: Faculty led assessment* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/JuaniataCaseStudy.pdf>

LaGuardia Community College

Because of LaGuardia Community College's reputation as a leader in learning outcomes assessment, particularly through the use of electronic portfolios (ePortfolios), it was selected by NILOA as an instructive case study. LaGuardia has grown its assessment efforts by having an institutional commitment to assessment at both the top-down and grass-roots levels, a collaboration across units, and a robust program review system that includes assessment.

- Provezis, S. (2012, June). *LaGuardia Community College: Weaving assessment into the institutional fabric* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/LaGuardiaCaseStudy.pdf>

North Carolina A&T State University

North Carolina A&T University (NC A&T) was selected for inclusion as a case study for NILOA due to its commitment to improving its campus by developing a “culture of inquiry”—specifically as this relates to student learning outcomes assessment activities. Three elements have been instrumental in NC A&T's drive to become a more data-driven institution: 1) administrative leadership that encourages discussions and collaboration around student learning outcomes assessment activities on campus; 2) the use of professional development opportunities to help foster the involvement and commitment of faculty members; and 3) the systematic and intentional use of student feedback.

- Baker, G. R. (2012, February). *North Carolina A&T State University: A culture of inquiry* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/CaseStudyNCAT.pdf>

St. Olaf College

St. Olaf College was an ideal case study institution due to the institutional framing of assessment as inquiry in support of student learning and as meaningful, manageable, and mission driven; the utilization-focus/backward-design approach employed in assessment; the integration of student learning outcomes assessment processes into faculty governance structures; and the collaborative involvement of multiple stakeholders and the diverse ways in which evidence of student learning is utilized throughout the institution.

- Jankowski, N. (2012, April). *St. Olaf College: Utilization-focused assessment* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/wp-content/uploads/2019/08/StOlafCaseStudy.pdf>

Texas A&M International University

Texas A&M International University was selected as a NILOA case study institution due to: 1) its commitment to choosing assessments and tools appropriate for its students, 2) its long history with and innovative approach to assessment, and 3) the influential role of professional development at the institution to help prepare “Assessment Champions” and to expand the number of “pockets of excellence” in terms of assessment practices throughout the campus.

- Baker, G. R. (2012, April). *Texas A&M International University: A culture of assessment INTEGRATED* (NILOA Examples of Good Assessment Practice). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <http://www.learningoutcomesassessment.org/CaseStudyTAMIU.html>

References

- American Association for Higher Education. (1992). *Principles of good practice for assessing student learning*. Washington, DC: Author.
- Banta, T. W. & Associates. (2002). *Building a scholarship of assessment*. San Francisco, CA: Jossey-Bass.
- Banta, T. W., & Blaich, C. (2011). Closing the assessment loop. *Change: The Magazine for Higher Learning*, 43(1), 22–27.
- Banta, T. W., Jones, E. A., & Black, K. E. (2009). *Designing effective assessment: Principles and profiles of good practice*. San Francisco, CA: Jossey-Bass.
- Blaich, C. F., & Wise, K. S. (2011, January). *From gathering to using assessment results: Lessons from the Wabash national study* (NILOA Occasional Paper No. 8). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. Retrieved from <https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/OccasionalPaper8.pdf>
- Bresciani, M. B. (2007). *Assessing student learning in general education: Good practice case studies*. Boston, MA: Anker.
- Jankowski, N. A., & Provezis, S. J. (2011, November). *Making student learning evidence transparent: The state of the art*. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA). Retrieved from <https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/TransparencyOfEvidence.pdf>
- Kuh, G., & Ikenberry, S. (2009). *More than you think, less than we need: learning outcomes assessment in American higher education*. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA). Retrieved from: <https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/2009NILOASurveyReport.pdf>
- New Leadership Alliance for Student Learning and Accountability. (2012). *Committing to quality: Guidelines for assessment and accountability in higher education*. Washington, DC: Author.
- Provezis, S. (2010, October). *Regional accreditation and student learning outcomes: Mapping the territory* (NILOA Occasional Paper No. 6). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA). Retrieved from <https://www.learningoutcomesassessment.org/wp-content/uploads/2019/02/OccasionalPaper6.pdf>

NILOA National Advisory Panel

Joseph Alutto

*Provost
The Ohio State University*

Trudy W. Banta

*Professor
Indiana University-Purdue University
Indianapolis*

Wallace Boston

*President and CEO
American Public University System*

Molly Corbett Broad

*President
American Council on Education*

Judith Eaton

*President
Council for Higher Education Accreditation*

Richard Ekman

*President
Council of Independent Colleges*

Mildred Garcia

*President
California State University -
Fullerton*

Susan Johnston

*Executive Vice President
Association of Governing Boards*

Steven Jordan

*President
Metropolitan State University - Denver*

Paul Lingenfelter

*President
State Higher Education Executive Officers*

George Mehaffy

*Vice President
Academic Leadership and Change
American Association of State Colleges and
Universities*

Charlene Nunley

*Program Director
Doctoral Program in Community College
Policy and Administration
University of Maryland University College*

Kent Phillippe

*Associate Vice President, Research and
Student Success
American Association of Community Colleges*

Randy Swing

*Executive Director
Association for Institutional Research*

Carol Geary Schneider

*President
Association of American Colleges and
Universities*

Michael Tanner

*Chief Academic Officer/Vice President
Association of Public and Land-grant
Universities*

Belle Wheelan

*President
Southern Association of Colleges and Schools*

Ralph Wolff

*President
Western Association of Schools and Colleges*

Ex-Officio Members

Peter Ewell

*Vice President
National Center for Higher Education
Management Systems*

Stanley Ikenberry

*President Emeritus and Regent Professor
University of Illinois*

George Kuh

*Director, National Institute for Learning
Outcomes Assessment
Adjunct Professor, University of Illinois
Indiana University Chancellor's Professor
Emeritus*

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 njankow2@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 went live on February 11, 2009.
- The NILOA research team has scanned institutional websites, surveyed chief academic officers, and commissioned a series of occasional papers.
- One of the co-principal NILOA investigators, 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.
- Peter Ewell joined NILOA as a senior scholar in November 2009.

NILOA Staff

NATIONAL INSTITUTE FOR LEARNING OUTCOMES ASSESSMENT

Stanley Ikenberry, *Co-Principal Investigator*

George Kuh, *Co-Principal Investigator and Director*

Peter Ewell, *Senior Scholar*

Jillian Kinzie, *Associate Research Scientist*

Pat Hutchings, *Senior Scholar*

Timothy Reese Cain, *Senior Scholar*

Natasha Jankowski, *Project Manager and Research Analyst*

Staci Provezis, *Research Associate*

Gianina Baker, *Research Analyst*

Nora Gannon-Slater, *Research Analyst*

Paul Myers, *Research Analyst*

T. Jameson Brewer, *Research Analyst*

Robert Dumas, *Research Analyst*

NILOA Sponsors

Lumina Foundation for Education

The Teagle Foundation

College of Education at the University of Illinois

educate innovation success ingenuity intellect curiosity challenge create achievement knowledge accountability connection self-reflection educate ac
derstand communicate curiosity challenge create achievement connection self-reflection understand communicate listen learn access quality actio
tion understand communicate listen learn action understand communicate listen learn access quality innovation success ingenuity intellect curiosi
allenge knowledge accountability connection access quality self-reflection curiosity challenge create achievement learn access quality innovation s
genuity self-reflection educate action understand intellect knowledge accountability connection self-reflection educate action understand knowledg
countability connection self-reflection educate action understand communicate listen learn access quality innovation success ingenuity intellect cu
allenge connection knowledge accountability connection self-reflection educate action understand communicate listen learn access quality innovat
ccess ingenuity challenge create achievement connection self-reflection educate action understand connection self-reflection understand communi
ten learn access quality action create achievement connection self-reflection educate action understand communicate listen learn access quality in
ccess educate action communicate listen learn access quality action educate action understand communicate educate innovation success self-refle
nowledge accountability communicate listen learn achievement connection self-reflection educate action understand communicate listen learn acce
novation success ingenuity intellect access quality innovation success self-reflection curiosity challenge create achievement connection self-reflect
derstand educate action understand communicate listen learn action understand communicate listen learn access quality innovation success inge
riosity challenge create achievement connection self-reflection understand communicate listen learn access quality action create achievement con
lf-reflection educate action understand communicate listen learn access quality innovation success educate action communicate listen learn acces
ality action educate action understand create achievement connection self-reflection understand communicate listen learn access quality action cr
hievment connection self-reflection educate action understand communicate listen communicate educate innovation success self-reflection knowl
countability connection self-reflection educate action understand communicate listen learn access quality innovation ingenuity intellect connection
flection understand communicate listen learn access quality action create achievement connection self-reflection educate action understand comm
ten learn access quality innovation success educate action communicate listen learn access quality action educate action understand communicate

National Institute for Learning Outcomes Assessment

For more information, please contact:

National Institute for Learning Outcomes Assessment (NILOA)
University of Illinois at Urbana-Champaign
340 Education Building
Champaign, IL 61820

learningoutcomesassessment.org
niloa@education.illinois.edu
Phone: 217.244.2155
Fax: 217.244.5632