



Collaborative Leadership for Student Learning Outcomes Assessment

A Resource for Academic Departments and Centers for Teaching and Learning

The assessment of student learning outcomes is now an expectation on virtually all campuses. The nature of that work varies, of course, depending on context and purpose. Accreditation continues to be a major driver, but most campuses today report that they are also driven by a desire to improve teaching and learning (Jankowski, Timmer, Kinzie, & Kuh, 2018). Meanwhile, the practice of assessment continues to evolve, with promising developments in classroom assessment and assignment design, the scholarship of teaching and learning, learning analytics, and [lessons learned about assessment in on-line environments during the COVID pandemic](#).

This resource, created by the [Bay View Alliance](#) (BVA)—a network of research universities working to bring more effective teaching approaches into wider use—focuses on yet another development: making assessment a more central and engaging process within academic departments. This focus reflects one of the shaping principles of the BVA’s work: that the department is a particularly promising context for transforming academic culture in ways that support innovations in teaching and learning. It also reflects a promising development on a number of BVA campuses in which academic departments collaborate with centers for teaching (and other units that provide leadership for instructional improvement) to promote meaningful approaches to assessment. These centers are named in various ways; in this document we refer to them as Centers for Teaching and Learning [CTLs] or simply as centers.

Drawing on the experience of BVA campuses, this resource—intended both for CTLs and academic departments—has four goals:

1. To **describe the features** of departments where assessment has taken hold in promising ways;
2. To **raise awareness** of the variety of ways that CTLs and academic departments can partner around assessment, with attention to the goals and roles for each;
3. To **share diverse examples** of these kinds of collaborations;
4. To identify **resources** for further work.

Features of Departments with a Strong Culture of Assessment and Improvement

Having clear goals — a vision of what success would look like — is a key tenet of effective assessment. The following list reflects conversations in the BVA Working Group on Assessment and other BVA projects in which assessment plays an important role. Departments, as well as CTLs collaborating with departments, may find it useful in tracking progress toward a culture of assessment and improvement.

1. Assessment is understood not as an “add on,” but as an integral and transparent part of teaching and learning and ongoing departmental decision making.
2. There are purposeful occasions for department members to discuss and identify shared goals for student learning, as well as adopt well-aligned instructional activities and assessment methods that support those goals.
3. Those learning goals are documented in ways that are available to all, including students, and provide the framework for effective and equitable curricular, course, and assignment design.
4. Through its regular processes of department meetings, retreats, and more formal program review, the department seeks out, collects, disaggregates, and values evidence about how and how well students are achieving the agreed-upon goals. This work is shaped by an appreciation that evidence may take a variety of forms depending on purpose and on disciplinary norms.
5. There are dedicated occasions for analyzing and reflecting on departmental assessment data. This means focusing not only on areas where students are clearly meeting goals but thoughtful engagement with evidence about where improvement is needed and where issues of equity and fairness need addressing.
6. Department policies ensure information about learning and assessment is collected, organized, and archived in ways that can be accessed and built on over time.
7. The department seeks out opportunities to build expertise and leadership for the assessment and improvement of student learning outcomes.
8. Work on assessment, and related forms of inquiry that build knowledge about teaching and learning (such as the scholarship of teaching and learning or learning analytics) are valued in personnel decisions.
9. Data-informed innovation and improvement are central to the department culture. People talk about teaching, trade pedagogical ideas and tools, seek out information about what works, attend to issues of equity and inclusion, and use what they learn to plan and implement revisions that support success for *all* students.

Different Roles, Common Goals: How Centers for Teaching and Academic Departments Can Work Together on Assessment

Effective collaborations between CTLs and academic departments work best when it is clear why each partner in the collaboration is essential and what roles and goals can guide their work toward a culture of assessment. Accordingly, this section is in two parts: the first focuses on the role of the center in its work with academic departments; the second focuses on the role of department leaders.

The Center for Teaching and Learning as an Assessment Partner

On many campuses, academic departments’ practice of assessment varies considerably, with some just beginning and others quite far along in achieving the culture of assessment and improvement laid out in the previous section. As a result, CTLs must be nimble, flexible collaborators. The question is how best to strategically position their efforts to increase the adoption of best assessment practices in diverse department settings. What follows are two approaches – complements, not alternatives – that can guide the work of CTLs.

| CTL as <i>Careful Responder</i> | CTL as <i>First Mover</i> |
|---|--|
| In designing programs and workshops, relies on inductive reasoning: how to help faculty navigate assessment expectations from accreditors and university administrators. | In designing programs and workshops, relies on deductive reasoning: how to encourage and support departments as they increasingly develop best practices around assessment. |
| Leverages expertise and practice to deploy specific (yet ad hoc) assistance to departments on an as-needed basis. | Relies on the Center’s scholarly knowledge of change theory and faculty development to orient the direction of assessment work. |
| Listens to faculty carefully and routinely and works to decrease barriers to entry to discussions around assessment. | Proactively shapes incentives and develops utility narratives about assessment to create new demand for collaboration. |
| Applies best practices in consulting with departments about their present interests. | Creates momentum around the adoption of best practices through leadership and rapport. |
| The most effective careful responder initiatives target willing departments and find ways to deploy consultative services at scale. | The most effective first mover initiatives have a crystal-clear purpose and a resonant story about how effective assessment lifts up the institution. |

Department Heads and Leaders as Assessment Partners

CTLs can be valuable partners in helping departments put in place useful approaches to the assessment of student learning, but program heads and leaders bring expertise as well and can play a number of critical roles in making the partnership successful. The following identifies a number of these roles and why each is essential for putting in place assessment practices that strengthen learning and teaching.

| Role | Significance |
|--|---|
| <p>Understands and shares departmental or disciplinary language, examples, and barriers likely to impact the planning and implementation of effective assessment.</p> | <p>Limits the jargon and concepts shared by the CTL to the essential assessment concepts given the context and prevents missteps likely to derail the change process.</p> |
| <p>Regularly brings clarity of purpose to the department’s assessment efforts.</p> | <p>Grounds the group in a shared departmental purpose over time and clarifies why the department is committed to change.</p> |
| <p>Elicits feedback from department members, particularly informal leaders, about the progress of assessment plans and practices.</p> | <p>Gains and uses feedback to pivot as required and manage power dynamics in the group <i>for</i> the change project instead of <i>against</i> it.</p> |
| <p>Uses social capital to connect assessment to the values of the department and its members.</p> | <p>Helps the group grant benefit of the doubt to the change initiative and persevere when barriers arise or expend efforts over time.</p> |

Promising Partnerships: Examples from BVA Campuses

Many campuses today have centers for teaching or other units to support faculty in their work as teachers. A growing number of those centers now have positions and programs designed to support work on assessment, as well. This often means supporting classroom assessment by individual faculty but some centers are also collaborating with **departments and programs** to advance effective practices in the assessment of student learning outcomes (Kinzie, Landy, Sorcinelli, & Hutchings, 2019). What follows here are examples from a number of BVA campuses that have moved in this direction or are beginning to explore what might be possible. Their purpose is to illustrate the various forms these collaborations can take, their rationale, goals, and sometimes challenges. Some are explicitly identified with the frameworks described above—as “careful responders” or “first-movers”—but these approaches are not mutually exclusive, and emergent, often multi-faceted practices may not neatly fit the two categories.

University of Kansas

Building Departmental Assessment Know-How and Leadership through a First-Mover, Grant-Funded Initiative

Joshua Potter | Documenting Learning Specialist | Center for Teaching Excellence

In 2017, the CTL at KU acted as a *first mover* in designing a novel, grant-funded program that aimed to enlist small collections of similar academic departments in long-term collaborations around assessment. The name of the program was the Documenting Learning Collaborative (or DLC) and it sat alongside (and separate from) KU's broader assessment practices, which required departments to annually report on their students' learning to the provost's office. With the DLC, our idea was to offer stipends to teams of colleagues from within each department and work toward designing and implementing an assessment project focused on *their* interests and in response to *their* needs (rather than in fulfillment of university-wide expectations). CTL staff would meet with them routinely for an academic year, matching their time investment with our own work hours, and also curate several group meetings where the teams could compare notes across departments.

The DLC has now seen three iterations. The first year's focus was Humanities (enlisting the departments of History, English, Philosophy, and Art History); the second year was Visual and Performing Arts (Music, Dance, Theatre, and Visual Art); and the third year was a collection of professional programs (Pharmacy, Social Work, and Project Management). In each iteration, the teams organically led the directions of the projects. The humanities departments gravitated toward curriculum-level visualizations of how their courses hung together and scaffolded learning outcomes in sequence. This group's work actually gave rise to a number of novel learning analytic tools that are now broadly utilized by faculty across KU. The performing arts departments devised new methods of assessing student learning (like a multi-modality "visual rubric" for creative projects) and worked assiduously to build awareness of best practices among their colleagues within their home departments. Finally, the professional programs were collectively interested in locating opportunities for organic, inquiry-driven practice of assessment beneath the umbrella of their professional associations' accreditation expectations.

While each iteration of the DLC results in a clearly delimited, finished product, it also measurably enhances assessment practice in each department in the long-run. The culminating experience of the academic year is a lunch event where each team presents the results of their projects to administrators from the deans' and provost's offices. This promise of visibility with university-level decision-makers establishes these departments as being among the vanguard practitioners of assessment at KU. Academic leaders can then look to them as exemplars of best practice when representing KU to external stakeholders, such as our board of regents and the Higher Learning Commission. I have also found that DLC teams are able to create sustained momentum around assessment in their home departments; among other indicators, their annual assessment report submissions to the provost's office bear evidence of continued excellence in assessment work. They are also assessment innovators, partnering with our offices of institutional research, career services, and alumni development to reach and communicate with students about learning in truly novel capacities.

We have found that this type of one-time, focused investment of CTL money and staff yields benefits for years to come. To be specific about the resources involved, we spend about \$19,000 on each DLC; this breaks down to four grants of \$4,500 to each of four departments who typically use the money as faculty stipends (plus some additional money for food at each of our group meetings). We ask that each team be comprised of three tenure-track faculty, at least one of whom holds a significant position of leadership in the department (this typically ends up being the chair or director of undergraduate studies). The CTL convenes the group of teams for a half-day kick-off session and then reconvenes at least three additional, shorter meetings over the course of the year. CTL staff meets separately with teams on an as-needed basis, often working alongside them on data collection or instrument design. All told, the CTL work hours investment comes to 40-50 hours per team. Each individual faculty participant will spend 10-40 hours over the course of the year.

University of Saskatchewan

Co-Designing Assessment for a New First-Year Engineering Program

Wendy James | Manager, Curriculum and Professional Development | Gwenna Moss Centre for Teaching & Learning

Sean Maw | Jerry G. Huff Chair in Innovative Teaching & Associate Professor | College of Engineering

The University of Saskatchewan's (USask's) College of Engineering decided to make changes to our first-year program starting in 2017. Our work was led by a Design Committee (DC) from inside the college, composed of an Associate Dean, experienced faculty including a department head, faculty with teaching-focused appointments, and a member who was hired with support from a curriculum innovation grant from the CTL. The DC had the responsibility for developing a complete first-year program from the ground up. The team engaged with curriculum specialists from our CTL, and they called on others from the CTL when the DC needed their expertise. Assessment was one of these areas, and the CTL functioned as a *careful responder*.

Our DC team had already decided to move to integrated modules and was wrestling with how to give multiple attempts at skills students were struggling with when I was invited in as an assessment specialist. We explored DC's assessment goals by discussing the program's key needs, looking at a continuum of assessment practices, and settled on a practice that was a mix of outcomes-based and competency-based approaches. When the DC encountered assessment-oriented problems they wanted to discuss, like how to include a student's second attempt on an assessment in a course grade, the best ways to give early feedback and practice, or how to set and use a threshold for competency, we would meet again to work it through using the specific first-year courses the DC members would be teaching. The approach focused on just-in-time support that required a high degree of facilitation and coaching fluency from the CTL members like me, in addition to expertise in assessment alternatives.

The DC brought a strong understanding of the constraints of the program and their disciplinary culture, and they tackled the changes conceptually and practically as a team. They met consistently internally and with other stakeholders, and made changes to their own courses, seeking feedback from other stakeholders to get support for the change. We consistently acknowledged the DC team as Engineering teaching specialists making informed changes in the best interests of students and thought of ourselves helping them with their goals. When they asked for the most current thinking on assessment practices, we shared it through concrete examples, and language the DC team constructed to describe their specific approaches (for example, leveling types of questions as A, B, B+ or C to describe their complexity relative to the course outcomes) was readily adopted by all three members of the CTL team that worked with DC. New ideas were offered as solutions to problems the DC team discovered or ideas they had for ways to proceed, and the whole team discussed the merits and issues of each potential solution. The DC team prototyped solutions and explored their implications, which was a disciplinary problem-solving approach for them, and the CTL fit into the DC process, utilizing coaching questions to prompt further exploration when needed. The CTL stayed engaged throughout the pilot process, which proved essential from a design, problem-solving, and work-load management perspective.

University of Colorado Boulder

Building an Institutional Assessment Strategy from the Ground Up

Stephanie Foster | Assessment Lead, Center for Teaching & Learning

The University of Colorado Boulder (CU Boulder) launched the Center for Teaching & Learning (CTL) in fall 2019, as part of an institutional goal to create a culture of student-centered practice. The new CTL was built with assessment as a central part of its mission to promote innovative and evidence-based teaching. I was hired as the first Assessment Lead with the charge to build capacity amongst the faculty to carry out high quality assessment in the classroom, and to help develop tools and strategies for assessing teaching and learning in academic programs.

While programs with specialized accreditation in Engineering and in the Leeds School of Business have established assessment strategies, learning outcomes assessment is new to most of the CU Boulder faculty. A small team in the Office of Data Analytics supports academic departments in their program-level assessment efforts, including developing learning outcomes and assessment plans. Working in cooperation with this team, one of my roles as Assessment Lead is to develop materials and programming to promote authentic course-based assessment, as well as to engage with new challenges such as assessment in remote learning environments.

Institutional leaders recognize that that CU's strengths lie in faculty expertise, so change strategies must focus on developing expertise in assessment and improvement within the academic units, based in disciplinary knowledge about teaching and learning. CU leaders believe that as the faculty learn about effective assessment practices, they will bring the

innovations to their peers and programs. At the same time, we understand that larger program-level and institutional goals must be addressed through more incremental strategies. Thus, we see ourselves working both as *careful responder* and *as first mover*.

The CTL has been sensitive to the demands on faculty brought by the COVID-19 pandemic, so we have been careful to “right-size” our offerings. In the early phases, we have developed online resources and open-access workshops. The first Summer Teaching and Assessment Institute convened 20 faculty to practice strategies inspired by James M. Lang’s “Small Teaching” book. A collaboration with the Office of Data Analytics (ODA) produced a popular set of sessions about using student evaluations of teaching as part of an equitable approach to the assessment of teaching for merit reviews. CTL staff have partnered with campus offices to support diversity, equity, and inclusion assessment initiatives.

As CU Boulder moves forward with campus-wide student success initiatives, there are high expectations for the CTL to lead in the culture change efforts. Drawing from organizational change strategies, we will encourage faculty to learn about and adopt assessment practices using a variety of approaches combining education, engagement, and support. In the coming year, the CTL will launch three new programs. The Assessment Projects Micro-Grants program will provide expert assistance and a small amount of funding for faculty to develop assessment questions and strategies, collect and analyze data, and make sense of the results for use in course and curriculum decisions. We believe this will help faculty support their academic programs by asking and addressing important questions about student learning. The partnership with ODA will help strengthen the connection between course- and program-level assessment and create meaningful outcomes. Second, an Assessment Community of Practice will be a place for faculty to explore ideas and get support for assessment efforts in a community of peers. Communities of Practice have been used successfully at CU Boulder to engage faculty in meaningful dialogue and improvement practice. Finally, a collaboration with the University Libraries will generate resources for evidence-based teaching and assessment practices in the disciplines.

CU Boulder is taking an approach to a major change that fits with the institutional culture and supports faculty to adopt assessment for the right reasons—to improve teaching and support student success. The CTL is respected as a hub for innovative, evidence-driven, equitable teaching and assessment practice and is seen as a trusted partner in campus initiatives. As the institution develops assessment policies, faculty will be better prepared to contribute to those conversations and advocate for their programs and students.

University of Toronto

Supporting the Improvement and Assessment of Student Writing through a Grant-Funded Initiative

Susan McCahan | Vice Provost, Academic Programs and Innovations in Undergraduate Education

Jessie Richards | Curriculum Developer, Innovations in Undergraduate Education

The University of Toronto (U of T) is a large, highly decentralized, research-intensive, urban, public institution. Students are enrolled in one of eighteen academic divisions (Faculties), and choose from approximately 700 undergraduate, and 200 graduate and professional academic programs. U of T is one university with three campuses, each of which has a comprehensive centre for teaching, learning, and research which offer varied programming and support to faculty, graduate and teaching assistants, and students. In addition to the campus-based centres, many of the academic divisions offer different forms of teaching and learning support, including educational technologists, faculty developers, communities of practice, and so forth. Given the size and complexity of U of T, there are always many rich and innovative projects related to teaching and learning on the go across the institution, including a variety of ways in which the centres for teaching and learning across the institution partner with academic units.

An example of one such partnership is the Writing Development Initiative (WDI) at the University of Toronto, Mississauga (UTM). The WDI was developed by UTM's student support and faculty development centre, the Robert Gillespie Academic Skills Centre (RGASC), acting as a *first mover* with the intention of supporting faculty to improve writing skill development in academic courses. The WDI is a grant program wherein faculty submit proposals to make changes to existing courses, and the RGASC provides funding for teaching assistants, along with course development guidance and project assessment services. The RGASC hires research assistants who use customized rubrics to analyze samples of student writing, assessing whether there has been an improvement in the areas prioritized in a given faculty member's proposal as a result of the course changes. The faculty then use these analyses to make further improvements to their courses.

Successful WDI projects are often funded over the course of multiple years to give them time to refine their course design and assessment practices. At the end of each year, faculty submit a report on what went well in the course that year and what could use further improvement (particularly, what they learned from the analysis of student writing artifacts, and often direct feedback from students). These reports are then used to help shape what further improvements can be made in the following year. Once a project has reached a point where they have demonstrated what the WDI committee calls "The 3 S's" — the projects have reached a **stable** form, they have been **successful**, and they have ongoing faculty **support** — the committee makes a recommendation to the Dean's Office that the course be given base funding to accommodate the increased TA hours so the course is sustained in its improved form.

In addition to accessing WDI to support the development of individual courses, some departments have leveraged WDI to support program-level development related to the improvement of writing skills. For example, the Department of Biology used the funding and support from WDI to make strategic changes to writing support across a number of courses, creating the "Scaffolded Scientific Literacy Learning Outcome Project". The department developed a detailed curriculum map indicating where scientific literacy skills are intentionally developed in key courses with the support of dedicated scientific literacy Teaching Assistants. Analysis of the curriculum map enables the Department of Biology to plan future initiatives to address any gaps in support for certain scientific literacy learning outcomes.

Queen's University

Signature Pedagogies for Transitioning Program Visions into Shared Assessment Practices within and across Courses

Lauren Anstey | Educational Developer | Centre for Teaching and Learning

Jordan Miller | Associate Director (Physical Therapy) & Assistant Professor | Rehabilitation Therapy

Starting early in 2019, the Physical Therapy program in the Queen's University School of Rehabilitation Therapy initiated a process of curriculum renewal that was inspired by changes in professional practices, accreditation standards, and increasing attention to the value of competency-based health professions education. Initial conversations led the program to identify the shared theoretical foundations, conceptualizations of learning, and educational principles shaping an emerging vision for curricular change. Seeking further support on next steps, Associate Director Jordan Miller, reached out to the Centre for Teaching and Learning for consultation. Specifically, Jordan was seeking strategies for translating these expressed foundations, concepts, and principles into program-wide plans for course-based teaching and assessment strategies. This connection enabled the CTL to act as a *careful responder*.

On review of the drafted theories, conceptions, and principles as expressed, Educational Developer Lauren Anstey, saw connections to her practice and curriculum theory expertise causing her to recommend a facilitated workshop framed upon Shulman's (2005) Signature Pedagogies. A retreat idea was proposed, and together, we (Lauren and Jordan), developed an agenda intended to foster dialogue between instructors of the program as to how they envisioned the various foundations, conceptualizations, and principles might shape instructional and assessment strategies in and between courses. The previously identified theories, conceptions, and principles were organized by Lauren into implicit, deep, and surface dimensions of teaching and learning, based on Shulman's (2005) framework. Workshop facilitation aided instructors to discuss and identify course-based activities and assessments that would best operationalize their curricular values. As a collaborative conversation, instructors were encouraged to identify ideas both within their individual courses as well as across the program, thus shaping program-wide ideas for assessment.

The CTLs role as a *careful responder* was one contribution in a broader effort, led and sustained by Jordan’s role as Associate Director, who may be viewed as a first mover within the unit. As an academic leader, Jordan unified instructors around a shared purpose: to collectively shape the Physical Therapy curriculum and the meaningful assessments that would enable students to demonstrate their progression towards competencies. He proactively incentivized instructors to engage and maintained momentum through sustained conversation, progress tracking, and careful curriculum mapping. The CTL stayed connected to the curriculum renewal process, actively listening for times when they might carefully respond again, as the program advanced with their curriculum and assessment development.

University of California, Los Angeles Center for Educational Assessment (CEA) as First Mover in Gathering Student Perspectives and Supporting Informed Decision-Making

Marc Levis-Fitzgerald | Director, Center for Educational Advancement

Adrienne Lavine | Associate Vice Provost, Center for the Advancement of Teaching

The [Center for Educational Assessment](#) (CEA) is a part of the UCLA [Center for the Advancement of Teaching](#) (CAT). Over the years, CEA has become a relied-upon partner and resource for academic departments and individual faculty as they work on the assessment of student learning. With the range of projects in its portfolio, CEA operates as both a *first mover* in advancing innovation in teaching and learning on campus, and *careful responder* to requests for support and expertise at all stages of project development, including proactively designing logic models, grant writing, assessment of learning, institutional review board (IRB) preparation, data collection and analysis, and dissemination of assessment results to diverse audiences. Research staff at CEA bring a wealth of experience and expertise from fields including education, psychology, and sociology to bear on projects that range from course-level innovation to campus initiatives and policies. CEA has also worked as a *first mover* in spearheading two survey initiatives that have led to greater data-driven decision making at the academic senate, division, and department levels: (1) the home-grown UCLA College Senior Survey, which has run annually for over ten years, and (2) the UCLA Remote Instruction Survey, designed to inform decision-making during our extended period of online teaching.

The Senior Survey was designed by CEA to obtain feedback from graduating seniors regarding their academic and social experiences, campus life, and post-graduate plans, and has become a powerful tool in supporting program review as well as wide-ranging efforts to improve teaching and learning on campus. Eligible students receive a survey invitation through the commencement ticketing process, incentivizing participation and supporting high response rates of close to 70% on average across years. The longevity and reach of the Senior Survey initiative have yielded robust data that allow for analyses of trends at multiple levels across campus. The data are featured in numerous dashboards (including by [division](#) and [program trends](#)) that are now used by senate leaders, deans, and department chairs. Recently, we began inviting departments to add customized questions in preparation for upcoming program review in 2021. Two majors and two minors participated in this new

opportunity and, as one might expect, questions about equity and inclusion are at the forefront. Senior survey data have also been used to inform research efforts across campus, and have been included in numerous publications (including [Kistner et al. 2021](#); and [Sellami al., 2021](#)).

The Remote Instruction Survey was born of swift efforts to obtain feedback on remote instruction at the course level in response to the COVID-19 pandemic. CEA collaborated with the [College Faculty Executive Committee](#) to design a questionnaire focused on learning, testing, accommodations, and community in remote courses. In spring 2020, students were asked 10 questions about their experiences in the remote classroom. To increase student engagement with the questionnaire and ensure that faculty members had direct access to their students' comments, the survey was reduced to four questions and administered alongside the regular end-of-quarter course evaluations through the [Evaluation of Instruction Program](#). These surveys garnered roughly a 45% response rate across hundreds of courses over the 2020-2021 academic year. Demographic items enabled us to look for variability in experiences among students from different backgrounds and majors, while the integration of Registrar data showed class size has proven to be an important variable of interest as well. [Data](#) were summarized in an [interactive dashboard](#) that was shared with individual instructors as well as campus leaders, enabling both immediate formative course-level feedback and [guidance on campus trends](#). The data were shared at department chair meetings, with the [Undergraduate Council](#), and presented to the broader academic community at the [2020 AACU Transforming STEM Higher Education](#) conference. These data have proven to be immensely valuable, and as the campus community has moved toward more in-person instruction in 2021, CEA has responded by launching the modified "Course Delivery and Engagement Survey" to include feedback from students participating in both remote and in-person courses.

Through these and other efforts, CEA has worked to be a nimble and dynamic campus partner in supporting informed decision-making at all levels of the University, while also continuing our work with faculty partners on external grants such as those funded by HHMI, Mellon, and NSF. As we move through uncharted times, CEA's survey tools will continue to grow and evolve in response to ongoing interest in diversity and inclusion as well as understanding how to best leverage remote instruction. Additionally, CEA is actively working to engage faculty in using these data sources to inform their teaching practice and departmental initiatives.

References and Resources

- Bens, S., Kolomito, K., & Han, A. (2020). Curriculum development: Enabling and limiting factors. *International Journal for Academic Development*. Online, Nov 2020.
- Huber, Mary Taylor, and Hutchings, Pat. (2021, September/October). Dynamics of departmental change: Lessons from a successful STEM teaching initiative. *Change: The Magazine of Higher Learning*, 53(5), pp. 42-47.
- Hutchings, P., Huber, M. T., & Ciccone, A. (2011). The scholarship of teaching and learning meets assessment. Chapter 4 in *The Scholarship of Teaching and Learning Reconsidered: Institutional Integration and Impact*. San Francisco: Jossey-Bass, 69-86.
- Jankowski, N. A., Timmer, J. D., Kinzie, J., & Kuh, G. D. (2018, January). *Assessment that Matters: Trending toward Practices that Document Authentic Student Learning*. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).
- Kinzie, J., Landy, K., Sorcinelli, M. D., & Hutchings, P. (2019). Better together: How faculty development and assessment can join forces to improve student learning. *Change: The Magazine of Higher Learning*, 51(5), 46-54.
- Kistner, K., Sparck, E., Liu, A., Sayson, H.W., Levis-Fitzgerald, M., and Arnold, W. (2021). Academic and professional preparedness: Outcomes of Undergraduate Research in the humanities, arts, and social sciences. *Scholarship and Practice of Undergraduate Research*. 4(4): 3-9.
- Potter, J. (2019). Modeling traffic: Visualizing data on students' curricular movements. *Change: The Magazine of Higher Learning*, 51(5): 56-63.
- Potter, J., Rehrey, G., & Shepard, L. (2021, October). In press. How the use of learning analytics bolsters faculty-led assessment work. *Assessment Update*.
- Sellami, N., Toven-Lindsey, B., Levis-Fitzgerald, M., Barber, P., and Hasson, T. (2021). A unique and scalable model for increasing research engagement, STEM persistence, and entry into doctoral programs. *CBE Life Sciences Education*. 20(11): 1-11.
- Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, 135(3), 52-59.

Contacts and Contributors

Lead Authors

- Joshua Potter (joshuadpotter@ku.edu) | University of Kansas
- Wendy James (wendy.james@usask.ca) | University of Saskatchewan
- Pat Hutchings (hutchings.pat@gmail.com) | Bay View Alliance and NILOA

Additional BVA Campus Contributors

- Sean Maw (sean.maw@usask.ca) | University of Saskatchewan
- Stephanie Foster (Stephanie.Foster@colorado.edu) | CU Boulder
- Susan McCahan (mccahan@mie.utoronto.ca) | University of Toronto
- Jessie Richards (Jessie.richards@utoronto.ca) | University of Toronto
- Lauren Anstey (l.anstey@queensu.ca) | Queen's University
- Jordan Miller (jordan.miller@queensu.ca) | Queen's University
- Marc Levis-Fitzgerald (mlevis@teaching.ucla.edu) | UCLA
- Adrienne Lavine (alavine@teaching.ucla.edu) | UCLA