

4

Building on an initiative of the National Institute for Learning Outcomes Assessment, Washington State University faculty have worked to develop more effective integrative capstone assignments in ways that support ongoing improvement.

Faculty Engagement with Integrative Assignment Design: Connecting Teaching and Assessment

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In the spring of 2016, the two of us planned and conducted a series of activities aimed at engaging faculty from Washington State University (WSU) in the collaborative design of integrative capstone assignments. The impetus for these activities, built on recent assignment-design work by the National Institute for Learning Outcomes Assessment (NILOA), was the institution's desire to link assessment more closely with teaching and learning. We hope to give readers a concrete understanding of the rationale for our efforts, how they were designed and undertaken, their impact thus far, and lessons learned. Additionally, we propose a broader view of what it means to “use” assessment for improvement. This broader view values data and the changes they set in motion but also the conversations, collaborations, and habits that support ongoing improvement.

Why Assignments?

An enduring challenge of the assessment movement has been using results to make changes that actually improve student learning and success (Banta and Blaich 2011; Blaich and Wise 2011). It was notable, then, when provosts reported in a national survey of campus assessment practices that evidence from the classroom is particularly useful for improvement (Kuh et al. 2014). Perhaps this is not a surprise: the papers, projects, examinations, and presentations that faculty require of students represent a form of assessment that is integral to teaching and learning, and thus more likely to be valued and deployed for improvement. A focus on assignments yields benefits in four ways.

First, assessment based on tasks that students regularly undertake in their courses is a route to greater faculty engagement with the process. Because the design of assignments has typically been private work, it has often been invisible and insufficiently valued and rewarded. However, faculty do not need to be persuaded that good assignments provide critical information about what students are and are not learning. Building assessment around course assignments instead of standardized external instruments can make assessment seem (and be) less like an add-on and more like an aspect of the faculty member's "regular" pedagogical work.

Second, assignments are a valuable component of assessment because they are where high-level institutional learning outcomes get translated into action on the ground. A majority of campuses have now formulated a set of learning outcomes expected of all students (Kuh et al. 2014). The challenge many institutions now face is how to drive those expectations down into practice, such that curriculum, course design, teaching approaches, and assignments align with those outcomes. A focus on assignment design is a way to advance this kind of top-to-bottom alignment (Hutchings 2016).

Third, when faculty are invited to work collaboratively to design assignments, important connections can be made as the focus shifts from "my students" and "my course" to "our students" and "our curriculum." Shifting the focus to assignments creates an opportunity for faculty to build linkages and forge more intentional pathways for student learning (Hutchings, Jankowski, and Ewell 2014).

Finally, well-designed assignments lead to more and better learning, as most faculty intuitively understand and as recent research makes clear. Looking, for instance, at writing's contribution to learning, Anderson, Anson, Gonyea, and Paine (2015) find that the *amount* of writing students do makes a difference for student learning, but the *design* of the writing assignment matters more. Mary-Ann Winkelmes and her colleagues also confirm the importance of assignment design. They document the power of assignments that are clear and explicit ("transparent") about their purpose, the task(s) entailed, and the criteria instructors use to evaluate student responses. Faculty who design or redesign assignments according to these principles find that students perform more successfully, with under-represented learners showing the greatest learning gains overall (Winkelmes et al. 2015; Winkelmes et al. 2016). In short, effective assignments are powerful pedagogical tools. Their value lies not only in generating authentic evidence about student learning, but in fostering and improving that learning, which is, after all, the goal of assessment.

NILOA's Assignment Design Initiative

During its work tracking campus engagement with the Degree Qualifications Profile (DQP), NILOA noted an interest in assignment design and began bringing faculty together to share and improve assignments. This

“charrette” experience, a collaborative design process borrowed from architecture education, allows faculty to create assignments that more explicitly align with course, program, and/or institutional learning outcomes, and that promote powerful student learning experiences.

The NILOA initiative has produced an online searchable collection of assignments (www.assignmentlibrary.org) and stimulated campuses to organize similar events, drawing on NILOA’s model and materials. While the details of these events vary across campuses, one thing the charrettes have in common is that they attend to and value what Jonson, Guetterman, and Thompson (2014) refer to as assessment’s “influence.” That is, the charrette experience is not only about using data, but stimulating faculty conversations, collaborations, and reflective inquiry. This broader vision of assessment’s “influence” was a guiding principle of the effort that began to take shape in 2016 at Washington State University.

The WSU Context

WSU is a land grant, research-intensive university with four campuses and satellite locations statewide. Its eleven colleges offer over sixty undergraduate degrees and nearly a hundred majors. Many departments currently use or are developing embedded assessments, which allow faculty to gather student learning outcomes data from coursework that students are already doing and faculty are already evaluating.

During a revision of general education in 2012, the university added a capstone course requirement (CAPS), which can also serve the major. In a few short years, faculty proposed, and faculty senate approved, more than a hundred capstone courses designed to provide a culminating experience for integrative learning, critical and creative thinking, information literacy, communication, and, if applicable, other learning outcomes for the major. Faculty and departments value capstone courses, where students demonstrate their skills and knowledge at the culminating point in a curriculum in ways that can provide important evidence about learning achievement and curricular effectiveness.

In 2015, with the first cohort under the revamped general education program approaching graduation, WSU launched its initial assessment of student performance in CAPS courses. This pilot highlighted the essential role that capstone assignments play in fostering and improving integrative learning as well as in generating authentic evidence about students’ achievement as they near graduation. WSU’s Office of Assessment of Teaching and Learning (ATL) and general education leadership realized the new capstone requirement offered a chance to connect teaching, learning, and assessment in ways that could apply to both general education and all majors.

The Professional Development Experience

The authors' collaboration began when WSU partnered with NILOA to mount a faculty development initiative that would support capstone assignment design. The idea was to adapt NILOA's model in order to bring WSU faculty together for collaborative peer discussions and feedback focused on their shared experiences and needs in the capstone environment. Our goals were to help faculty explore strategies to advance high-level, integrative outcomes for seniors; redesign assignments accordingly; increase transparency for students; and add to each instructor's toolkit of good practices. We also saw this as an opportunity to influence teaching beliefs and practices more broadly.

Coordinating with the provost's office, we developed an intensive professional development experience, inviting capstone faculty from all departments to participate in a collegial setting designed to support their learning. Thirty faculty from twenty-two departments and four campuses joined this project, which unfolded over two days in May 2016, with follow-up work that summer.

Day One: Principles and Purposes. The morning focused on principles of integrative learning, the design of assignments that ask students to extend prior learning and make connections in challenging and complex settings, and the importance of aligning assignments with target learning outcomes. Drawing on research by Winkelmes (2016), the workshop introduced elements of transparent assignment design to make purpose, tasks, and criteria explicit for all students.

During the afternoon, faculty discussed three capstone assignments from NILOA's collection and then adjourned to read one another's assignments and reflective memos from their designated group for the next day.

Day Two: Charrettes. Working in a small group of 5–6 individuals, each person had 25 minutes to briefly share his or her assignment and then invite suggestions from colleagues. Each instructor was a "presenter" for one round and a "participant" for the other rounds. In keeping with the NILOA model, participants also took 5 minutes at the end of each round to write feedback to the colleague whose assignment was under discussion. Groups were organized according to disciplinary affinities: humanities, social sciences, sciences, and applied programs. A facilitator managed time and encouraged constructive and collegial conversation.

Follow up. Following the workshop, faculty submitted a short memo about aspects of their assignment they wanted to strengthen and topics that would help them make those improvements. ATL provided workshop slides and publications on capstones, integrative learning, and assignment design. Faculty had the summer to digest the workshop concepts and feedback from colleagues, reflect on their own, consult resources, and revise their assignment. Nearly all faculty (twenty-seven out of thirty) submitted a revision of their assignment to ATL and completed a questionnaire about the project.

The vice provost sent letters of recognition to participants, copied to chairs, to communicate the value of this effort.

Outcomes

Faculty response to the workshop and summer redesign process was overwhelmingly positive. All participants said they left the workshop with concrete ideas about how to strengthen their assignment and would recommend the workshop to colleagues. By the end of the summer, most reported they had made important improvements to the design of their assignment. Improvements included making the purposes and instructions for the assignment more transparent (85%), refining the rubric to provide clearer criteria and/or feedback (59%), providing more intentional activities to integrate learning (52%), scaffolding steps toward a larger project (44%), and explicitly communicating capstone expectations and value (41%). Overall, faculty reported a dramatic increase in their satisfaction with the assignment.

Broadly speaking, changes made by workshop participants point to the power of this approach to assessment, which used faculty-designed course work to inform direct, more or less immediate, changes and improvements. Based on their previous assessment of student performance, supplemented and elaborated by peer discussion in the charrettes, faculty made changes in their assignment's design to more effectively advance and demonstrate student learning. In this sense, the workshop achieved its intended outcomes.

That said, we believe the value of the charrette experience goes beyond the immediate concrete outcomes reflected in revised assignments. Equally important are less direct kinds of "influences" achieved through faculty conversation, exchange, and inquiry. These influences, although harder to document and, as noted by Jonson, Guetterman, and Thompson (2014), often undervalued in the literature on assessment, can increase faculty's motivation, knowledge, and skills in ways that feed longer-term professional growth. These outcomes took a variety of forms.

New Ideas about Capstones and Integrative Learning. All participants said the workshop increased their understanding of capstones and integrative learning. Many faculty wanted to enhance integration and extension of prior learning (67%); increase student independence and agency (41%); and provide more formative feedback during complex projects (41%). These ideas about effective capstone experiences and integrative learning represent new tools faculty can use in future course and assignment design.

More Attention to Student Engagement. During workshop discussion, faculty identified a common disappointment: Some students see the capstone as one more required course and the key project as "just another assignment." To better communicate the value of the capstone to students,

most faculty now recognize the need to be more explicit about purpose, task, and evaluation (89%). Nearly half of the faculty also wanted to make the assignment more engaging and increase student agency.

An Appetite for Additional Faculty Development. Faculty requested professional development to deepen skills in assignment design (89%) and the use of rubrics (80%). Several departments expressed interest in offering focused charrettes to address some aspect of assignments in their undergraduate curriculum. Accordingly, ATL is providing follow-up faculty development, including customized sessions on transparent assignments.

Continuing Peer Connections. All faculty found charrette discussions useful and most reported feeling part of a larger WSU conversation about teaching (86%). Half commented that peer feedback was the most helpful aspect of the workshop, and expressed an interest in sharing with charrette members how their redesigned assignment worked out. To address this interest, WSU hosted a reunion in 2017 where faculty shared their redesigned assignment and reconnected as colleagues.

Impact on Teaching other Courses and Assignments. Participants reported that this intensive faculty development experience will impact the way they teach other courses (89%). In particular, faculty said they will design assignments differently in other courses (89%) and/or assess or grade student work differently (56%).

Fostering Inquiry and Evidence-Informed Practice. During the summer, over half the faculty sought out other research or sources to guide their assignment redesign (59%), including publications on transparent teaching, project-based or team-based learning, learning theories, capstone design, rubrics or assessment. Others looked at NILOA's assignment library or capstones at other universities. Encouraging faculty to dip into the scholarship of teaching and learning to inform just-in-time teaching decisions supports quality teaching practices.

Long-term Impacts on Departments and General Education. Improving faculty understanding of capstone experiences has obvious connections to the design and assessment of curriculum, activities that many faculty participate in for their department or general education. Often faculty teach courses that prepare students for capstone experiences and may also advise students; now they can better articulate to students and others the value of integrative capstones.

Lessons Learned

We hope readers will be intrigued about approaching assessment through assignment design. If so, we encourage you to tap into NILOA's assignment design toolkit (<http://degreeprofile.org/assignment-design-work/>). Additionally, we offer four lessons from the WSU experience.

1. **A focus on capstone assignments prompts powerful reflection and backward design.** NILOA's initiative on assignment design typically involves faculty who work on very different types of assignments. But WSU's focus on capstones seemed especially powerful, stimulating rich conversation about the nature of integrative learning, a cross-cutting (and often elusive) outcome that many institutions are targeting today, and one that calls for deliberation across fields. Additionally, the capstone focus prompts discussion with colleagues about how earlier assignments prepare students to think in more connected ways at the end of their program.
2. **Structure and framing matter.** The opportunity to share assignments provokes lively discussion, but it can also feel risky. Productive conversations require careful preparation and framing. This means being clear that the goal is not to "prove" that one's assignment is "perfect" but to make revisions that support student learning. At WSU, talking with peers from similar disciplines but other departments seemed to lower the sense of risk and reduced inclination to judge.
3. **The charrette is only a first step.** Current thinking about professional development emphasizes opportunities that go beyond a one-time workshop or seminar (Beach et al. 2016). This insight matters for campuses thinking about bringing faculty together to work on assignments. The charrette is a powerful starting point, but if efforts stop there, an opportunity is lost. To reinforce and sustain the process, institutions can provide further resources, follow-up workshops, and additional charrettes.
4. **Data matter but they are not the only source of assessment's impact and use.** Jonson, Guetterman, and Thompson (2014) argue that the value of assessment has been underestimated because of an overly narrow conception of "use" that focuses on discrete, data-driven changes. The WSU (and NILOA) experience highlights the power of the assessment *process* (in contrast to the data it yields) to stimulate new ways of thinking, new relationships, greater capacity for promoting curricular coherence, and a commitment to ongoing improvement. We encourage campuses to be intentional about these kinds of less direct, longer-term, cultural changes resulting from faculty work on assessment. They may well be the changes most likely to improve the quality of learning and teaching in the longer run.

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