Building Faculty Capacity through Collaborative Work

Campus change can evolve in many ways, often a result of institutional strategic planning and/or external demands. But campus change can also result from action research work conducted by faculty and staff that leads to deeper insights into the connections between curricula, pedagogy, and student learning. Such was the case for the University of Massachusetts Lowell (UML) and Middlesex Community College (MCC) as a result of their participation in AAC&U’s Quality Collaboratives (QC) project from 2011 to 2014.

Using the Degree Qualifications Profile (DQP: http://degreeprofile.org/) framework, the QC project offered pairs of two- and four-year institutions (“dyads”) with existing transfer relationships an opportunity to pilot unique assessment models that might be useful in the context of transfer.

Underscored by the existing transfer and articulation relationships within their high transfer programs, faculty from the Biology, Business, Criminal Justice, and Psychology programs at UML and MCC collaborated over a two-year period to develop, implement, assess, improve, and re-assess cumulative assessments in their 100-400 level courses. The collaborations took place in discipline groups, and assessments integrated and measured one of the intellectual skills identified in the DQP – quantitative fluency (QF) – which both institutions had recently identified as an institutional and general education student learning outcome. Project leaders chose quantitative fluency as a focus, because they recognized the opportunity to further mutual professional development efforts to expand curricular and pedagogical opportunities at both institutions for all students, regardless of major, to develop this essential intellectual skill. By embedding these opportunities for QF development in courses within their general education programs, outside as well as within STEM fields, the dyad hoped to help students at both institutions develop QF skills that they would be able to situationally transfer. Additionally, the intent in working with this limited number of high transfer programs was to build the skeleton of a framework that could be scaled up and replicated to benefit all students within and across all of those programs at both institutions.
Prior to the QC Project, UML and MCC faculty had collaborated on assessment-related projects in which the focus was primarily summative assessment—the application of assessment criteria to student work, with discussion of student strengths and challenges indicated by assessment results. To improve the reliability of assessment data generated by such work, we had ensured that faculty assessors were not the same faculty who had contributed the student work products.

For this collaboration, project leaders took a different approach to assessment, based on two insights gained from their past experiences.

- First, they had found that summative assessment of student work that excluded the faculty who had contributed those student products impeded institutional efforts to “close the assessment loop” by utilizing results to improve student learning. Had we included the faculty who designed and implemented the assignments, we would have been better able to identify and implement necessary improvement strategies. Therefore, for this project, faculty who developed the assignments also participated in the teams that scored student work using the assessment tools.

- Second, there was often a significant mismatch between student work and the criteria used to assess that work. This is not surprising given that the criteria had not been a component of the assignment design process that resulted in the work being assessed. Thus, for this project, the work would begin not with the assessment of student artifacts, but with the design of assignments that would generate the work to be assessed.

Although originally conceived as an assessment project that would utilize the DQP framework to determine the level of QF complexity mastered by students in their work, with the decision to start with assignment design, project leaders decided that the DQP framework lacked sufficient detail to be formatively useful to faculty participants in their development of assignment prompts that clearly reflected critical and intended elements of student learning. Due to prior institutional and faculty use of AAC&U’s VALUE rubrics (http://www.aacu.org/value-rubrics), project leaders decided to incorporate their use. Faculty participants first mapped the DQP benchmarks for Associate and Baccalaureate level performance of QF to the VALUE Quantitative Literacy (QL) rubric, and then used the VALUE rubric for formative assignment design and follow-up summative assessment.
Project leaders built discipline-based teams that included UML and MCC faculty teaching at the “200” course level (courses typically taken by students in their sophomore year) to represent the DQP associate degree level, and UML faculty at the “400” course level (courses typically taken by students in their senior year) to represent the baccalaureate degree level. The inclusion of faculty from both institutions teaching 200 level courses also helped prevent any “us and them” perspectives related to student achievement of the two degree benchmarks, while also helping to strengthen the integrity of the transfer programs.

The project model included multiple structured meetings over the course of a year to provide faculty discipline-based opportunities that included:

- mapping of DQP benchmarks for QF to VALUE QL rubric;
- discussion of contextualized applications of QF in the program, within the framework of the DQP benchmarks, for progress to degree;
- development of cumulative, “significant” assignments intended to elicit student demonstration of QF at or above appropriate levels of complexity;
- peer review of these assignments to improve their likelihood of eliciting intended QF outcomes;
- assessment of student products generated by these assignments for student demonstration of levels of QF complexity; and
- debriefing insights into how assignments could be improved to generate improved results.

Because the QC grant was funded for two years, project leaders were able to offer faculty participants the opportunity to return to the project during the second year, in order to revise and implement assignments, and assess new results. Over 90 percent of the participants opted to do so, demonstrating their investment in assessment results that were built on intentional learning-centered assignment design. Representative project participant feedback included:

- “I am delighted this process has enabled me to develop something that is far more useful as a summative assessment tool...”
- “…It has made me realize that we need to do some work program-wide to incorporate more of this type of work across our curriculum. Not only in assessment development, but providing students opportunities to practice what they will need to do on the assessment....”
• “...I must say that in the past, I have not given much thought to test questions. I concentrate on covering the material, but don't objectively evaluate the approach I take to do so. Many of my courses require quantitative reasoning, yet I haven't honestly considered the level of student understanding. It was either correct, or incorrect....”

While debriefing at the end of the first year of the project, project leaders on both campuses identified elements of the project design that they perceived to have been the heart of the project’s success:

• Discipline-based faculty teams allowed for contextualization of assessment work.

• Formative discussion and integration of relevant assessment criteria into assignment design resulted in clear faculty engagement with assessment results and investment in “closing the loop”.

• The work was social, collaborative, and intellectually creative.

Due to the significant popularity of the QC project among faculty participants from both campuses, project leaders applied for and were granted state-level funding to expand the reach and impact of inter-institutional, transfer-based, scaffolded assignment design assessment work to other programs and learning outcomes. The DQP has been an integral part of this design process, using the same mapping process on associated VALUE rubrics while always being presented as a framework to which to react rather than a set of benchmarks to adhere. As a result, inter-institutional teams have thoughtfully engaged in curriculum and pedagogical design that, at its core, asks the question, “What is the value-added of the associate and baccalaureate degrees to students’ development of essential learning outcomes?”

These scaffolded learning outcome discussions have tapped into what we believe are some of the key issues at the heart of faculty interest at two- and four-year institutions:

• What should graduates of the four-year institution be able to do with their learning as they graduate with a baccalaureate degree?

• What is the value-added of the baccalaureate degree beyond students’ sophomore years in terms of their ability to apply their acquired knowledge in increasingly complex ways to authentic tasks, problems, and issues that they will encounter beyond graduation?

• How well prepared are transfer students as they enter the four-year institution?
• How does their knowledge base and their ability to apply that knowledge in increasingly complex ways compare with students native to the four-year institution?

Currently, led by the Commissioner of Higher Education in Massachusetts, our state’s public colleges and universities are engaged in Academic Transfer Pathways work that attempts to ensure consistency between and among community college courses commonly accepted for transfer credit at baccalaureate-granting institutions. Such consistency has long been based upon course descriptions and content. Based upon their experiences in the QC and successive projects, UML and MCC have intentionally placed QC project faculty on these Academic Transfer Pathway teams, to help facilitate discussions of contextualized, scaffolded learning outcomes within the context of courses accepted for transfer in comparable programs across the state. UML and MCC QC project leaders believe that outcomes-based curricular design and assessment practices will not fully “take root” at any Massachusetts college or university until there is a move from the “currency” used across transfer programs now – “inputs” such as course titles, numbers, descriptions and topics – to shared outcomes for our students.