

**Productive Shifts: Faculty Growth
through Collaborative Assessment
of Student Interdisciplinary Work**

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Faculty inquiry focused on student work can lead to conceptual changes in how we think about assessment, disciplinary expertise, and interdisciplinary learning—revealing the promise of learning communities for students and faculty alike.

In the scholarship of teaching and learning, few experiences are more energizing than the timely encounter between a novel idea and a group of faculty ready to experiment with, appropriate, and expand such idea advancing new knowledge that is firmly grounded in practice. In the same vein, few collective efforts are more rewarding than those that invite us to inquire and revisit our beliefs, better to prepare students for today's changing world. Such was the nature of the collaboration that brought twenty seven college faculty teams, Gillies Malnarich, Emily Lardner, and me together, as described in the opening pages of this special issue. In these comments, I draw on our shared insights feeling grateful for the commitment with which our group embarked in a joint experimentation. I outline productive shifts in faculty thinking that emerged from our sustained attention to the assessment of student interdisciplinary learning.

Setting the Stage

Like many of my colleagues traveling from distant cities nationwide, I arrived at our first Washington Center meeting in Seattle wondering what might become of the series of presentations and conversations about student interdisciplinary learning that Emily, Gillies and I had envisioned. My

research group at the Harvard Graduate School of Education had advanced a definition of interdisciplinary understanding and an empirically based model for its assessment that I was eager to share. I was also delighted with the prospect of learning about how our findings would meet what Lee Shulman calls "the eclecticism of practice."

Interdisciplinary understanding, we had posited, is

... the capacity to integrate knowledge and modes of thinking from two or more disciplines in order to produce a cognitive advancement—to explain phenomena, fashion products, solve problems, in ways that would have been unviable through single disciplinary means.

The scarcity of research-based knowledge about the assessment of interdisciplinary student work had led interdisciplinary expert Julie Thomson Klein rightfully to dub assessment the *Achilles Heel* of interdisciplinary education. Recognizing the crucial role of assessment in shaping learning, instruction and program evaluation we viewed it as a powerful window into faculty values and student minds. Assessment practices reveal our enacted theories about the purpose of education, we recognized. If we are to prepare our students to conduct quality interdisciplinary work we must uncover markers of quality toward which to direct our instruction. Identifying such relevant markers at the various involved institutions required a collective investigation in each campus. Faculty teams agreed to focus their attention on shared analysis of interdisciplinary student work setting the initial direction for our work together.

Scholarly and Actionable Knowledge

Supporting faculty inquiry requires more than clear theoretical principles and research findings. Early in our collaboration we detected the need to re-represent research-based findings in actionable form—to embed research insights in usable tools for reflective practice. To meet this need, I devised the targeted collaborative assessment protocol — i.e. a series of guidelines for a structured conversation to analyze student work (see Appendix A in opening paper, p. 16 of this issue). The protocol built, on the one hand, on collaborative assessment conference designs developed at Harvard Project Zero. On the other, it focused on quality criteria for interdisciplinary learning identified in our research.

For two years, faculty at different campuses gathered around samples of student work to examine their more and less obvious qualities, reveal their strengths, consider the learning challenges they illustrated. Once generally acquainted with a sample of student work, faculty exchanged

their interpretations by considering core elements of interdisciplinary understanding: They discerned the *purpose* that the student pursues in the piece of work examined; the ways in which two or more areas of expertise and *disciplines* informed the work, the ways in which different forms of expertise were *integrated*, and the *reflections* each student shared about the nature and limitations of his or her work. At each turn in the discussion, faculty offered evidence for their interpretations, pointing to particular aspects of the work. They valued the student's accomplishment and made recommendations for the student to improve less developed aspects.

Learning to run the protocol was not simple. The conversation is purposeful, paced, and structured resulting in slightly awkward exchanges. Identifying markers of "integration" presents important demands. As the papers in this issue suggest, the protocol process was adapted to meet various assessment purposes and contexts. Some groups used the protocol to inform grading and program evaluation, others to adjust assignment designs, others as an opportunity to begin meaningful faculty collaborations on campuses. Some opted for using questions and probes selectively, others chose to include students as collaborators in the assessment process. In the most generative cases, a sustained and collaborative reflection about student learning raised new questions and invited pivotal changes in faculty and students' conceptions of assessment, interdisciplinarity, teaching and learning, and the purpose of education in the 21st century.

Productive Shifts

How did faculty expand, reinterpret, adjust, and reconsider initially familiar ideas? Faculty's growing capacity to assess student interdisciplinary work was punctuated by productive shifts in thinking, which we sought to document over time. I frame them below as shifts between two views "from" and "to". They embody pivotal shifts in faculty professional development.

Changing views about assessment

From: Assessment as a tool to control *whether* students have acquired course *information*

To: Assessment as a tool to find out *how* students are *making sense* of course *concepts, habits of mind* *competencies and connections*

From: Assessment as generally assigning a grade to a sample of student work

From: Assessment as a private act

To: Assessment as also collaborative and public

From: Assessment as a post hoc commentary on student learning

To: Assessment as an integral reflective dimension of learning

From: Assessing a single final product

To: Assessing a final product in the context of a series of sources of evidence of student developing understanding

Changing views of disciplinary expertise

From: Disciplines as stable and bounded collections of findings and skills

To : Disciplines as dynamic and ever-changing intellectual and practical enterprises

From: Disciplinary knowledge as an instructional end in itself

To: Disciplines as lenses through which students understand the world in an informed way

From: A concern with distinguishing disciplines from one another

To: An emphasis on distinguishing disciplinary expertise from simple common sense

From: Disciplinary expertise as cumulatively acquired

To: Disciplinary expertise as requiring that students transform early beliefs and make new sense of the problems under study

From: Disciplines as purely socio-political structures of power

To: Disciplines as both social and epistemological entities provisionally fit to inform particular kinds of problems or phenomena

Changing views of interdisciplinary learning

From: Viewing interdisciplinary learning as an end in itself

To: Viewing interdisciplinary learning as a means to build deep and broad understanding of relevant public issues

From: Viewing interdisciplinary student work as unrelated to disciplines

To: Viewing interdisciplinary student work as directly informed by expertise in the disciplines and established fields of knowledge

From: "Naming" disciplinary connections apparently made in interdisciplinary student work

To: Identifying the particular disciplinary concepts, skills and modes of thinking present in the work.

From: Valuing students' explicit references to interdisciplinary work

To: Valuing students' demonstrated capacity to carry out interdisciplinary work—whether explicitly labeled as such or not

From: Valuing students' focus on a general "theme" to which multiple disciplines speak often in a parallel fashion

To: Valuing students' articulation of a multifaceted topic that demands the integration of disciplinary forms of expertise

From: Having a general sense of a sample of student work as interdisciplinary

To: Becoming able to articulate what makes a sample of work interdisciplinary considering the topic addressed, the approach selected, the disciplines informing the work, the ways in which integration yields new insights, and the reflective qualities of the work

The conceptual changes outlined above punctuated the process of faculty inquiry. They appeared in the form of discovery moments in informal conversations, as the resolution of an assessment puzzle, plans for further actions or in the form of emerging questions. They represent understanding on the part of individuals or small groups, but not collective shifts in thinking—as participating individuals exhibited different points of departure and personal pathways for inquiry and growth. Furthermore,

these productive shifts do not always entail an abandonment of faculty's initial positions but a shift in the center of gravity of their focus and thoughts. Taken together, however, these conceptual changes speak to the generativity of our assessment enterprise and the promise of learning communities for students and faculty alike.

Assessment as Collaborative Inquiry

In the current political environment, any discussion of quality assessment of student learning is delicate. Transformed into items on standardized assessment instruments, even our best intended quality descriptors risk losing the rich meanings with which they emerged, if applied massively and unreflectively. The collaborative assessment process described in this issue, militates against oversimplification by creating a structure where genuine inquiry about student learning can take place. When faculty engage in evidence-based deliberations about learning processes and outcomes, they are better prepared to inform their students' progress. Perhaps most consequentially, however, they establish a public procedure to re-calibrate teaching and learning values and expectations on campus. At a time when rapidly changing societies impose increasing new demands on higher education (from nurturing global citizens, to developing 21st century skills), interdisciplinary collaborative assessment conferences may become much needed pockets of intelligent deliberation, where focused discussions about student learning give room to a broader consideration of the purpose of education in the 21st century. For that opportunity... my colleagues in this project and I were thankful.