



Design Thinking as a Strategy for Consensus in General Education Reform

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When you are developing a new course, one recommended approach is to begin by defining your learning outcomes and then to work backwards from there to determine the appropriate course topics, materials, and assessment methods. In 2011, as Philadelphia University prepared to launch an ambitious initiative for reforming general education, we wondered if we could apply the same “outcomes-first” approach to a university-wide curriculum. Our goal was to establish general education learning goals that we could extend into all of the university’s majors as well as its cocurricular programs.

Due to our institution’s focus on professional education, sometimes our general education curriculum has been a point of contention. When our major programs have felt pressured by their accreditors and the labor market to expand the practice-based education of their students, one of their responses has been to look for a reduction of general education requirements. For some students, general education requirements have been seen as a distraction from their training in fields such as architecture, health care, or fashion design. And although our existing general education core curriculum, the College Studies program, was carefully sequenced, regularly improved in response to assessment, and based on relevant outcomes, students often had trouble recognizing the goals or value of the general education curriculum.

RE-VISIONING GENERAL EDUCATION

To address this gap between the different elements of student learning on our campus, our provost’s office assembled a faculty steering committee and asked it to “re-vision” general education in the context of our mission of professional education. Our mandate was to seek innovative ways to establish general education as the joint and shared responsibility of the core curriculum, the majors,

and cocurricular learning experiences such as study abroad, internships, and student leadership in residence halls and campus organizations. On paper, this broad understanding of general education had long been an element of our approach. However, an external review of our program in 2012 concluded that there was little awareness of this connection between general education and professional education among faculty outside of the general education core curriculum, or among our student body as a whole.

At that time, Philadelphia University was pioneering a new approach to professional education for its students studying in the design fields, in engineering, and in business. Anticipating a twenty-first-century workplace where multifunctional teams routinely collaborate in the conceptualizing, development, testing, and marketing of new products and services, we established our new Kanbar College of Design, Engineering, and Commerce to bring students from the design, engineering, and commerce (DEC) fields together through shared common courses and project-based learning experiences. The DEC core curriculum is organized around real-world, collaborative projects and applies design-thinking approaches to problem-solving and value creation in a team setting. As our DEC colleagues were introducing our students to this model of multidisciplinary collaboration and design thinking to identify opportunities and solve problems, it seemed only natural that we would apply it to our own work on general education.

The design-thinking approach involves observing and deeply understanding the situation that you are trying to improve, including gathering viewpoints from different participants or stakeholders in the situation. Our external reviewers had already helped us identify some key problems with our general education program: our campus community had neither a widely shared



understanding of general education nor a strong awareness of our learning goals in this area. In light of these findings, our first step was to devote one of our monthly university faculty meetings to a visualization exercise designed to encourage dialogue about general education. Mixed groups of faculty from all across campus sat together at large round tables with sketch pads and markers; their assignment was to work collectively to design a diagram that illustrates the relationships between the majors, the cocurriculum, the core curriculum, general education, and liberal education. The dizzying variety of different images and metaphors that resulted from this exercise reflected much meaningful thought about the topic, while also confirming that our university community lacked a clear vision of general education and how it could best be achieved. Our steering committee also organized separate events for students to discuss and share their ideas about how to create more effective and meaningful general education.

COMMON GROUND FOR GENERAL EDUCATION

Our efforts to define the common ground for general education between the majors and the core curriculum led to one of the pivotal events in our initiative. The executive dean of the Kanbar College of Design, Engineering, and Commerce, Ron Kander, who oversees a variety of majors that require special professional accreditation, remarked that a number of these accreditors included broad liberal education skills and competencies in their assessment criteria. This observation inspired our next design-thinking event, adapted from an exercise used in the DEC core curriculum. We collected the criteria from all of the professionally accredited programs on campus, printed out each one on a separate sheet of paper, and pinned them all up on the magnetic white boards

that cover the walls of one of the large studios in our new collaboration-focused classroom building, the Lawrence N. Field DEC Center. With over 130 different criteria shuffled and randomly distributed on the walls, this room became the setting for an “affinity clustering” activity. We invited a group of faculty and administrators to join us there and asked them to group the criteria according to perceived similarities. This was a self-organizing process—anyone present was free to arrange and rearrange the criteria any way they wanted. As clusters began to form, participants began to label them by writing a category name on the white board above them. In the span of twenty or thirty minutes, the rearranging had slowed to a stop, and we could see what kind of categories had emerged. We had a few categories for very technical or functional skills specific to one field or another, and a number of other, more universal categories like “collaboration,” “critical and creative thinking,” and “ethics” that our accreditors valued and expected from programs across a variety of professional fields.

The “affinity clustering” exercise was critical in shaping our collective thinking about general education. It reassured our general education faculty that there were common learning outcomes that spanned both the professional majors and the core curriculum, and it convinced faculty and program directors in the majors that these outcomes were essential to their curricula, suggesting that a coordinated approach to them, in partnership with the core curriculum, would be an effective way to prepare their students and satisfy their accreditors. The affinity clusters also gave us a taxonomy of learning goals that we could begin to work into a new framework of outcomes for general education on our campus.

The next step in our initiative was to articulate our approach to general education in terms of a “value proposition,” a

concept taken from the Business Models course in our DEC core curriculum. Developing a value proposition is a technique for framing a new product or service in a compelling way that demonstrates its value to the potential user or client. The process involves answering questions to determine what problem the product or service is solving (or what need it is satisfying) for the user, and what differentiates it from similar products.

We organized university faculty meeting attendees into small groups and used a series of questions to guide each group through the formulation of a value proposition. Our steering committee collected and distilled the results to produce a draft that we brought back to the full faculty later for review and comment. From there, we held a series of faculty workshops to begin translating our value proposition findings into learning goals for a new general education program. The end result was a collection of broad general education learning goals, each expanding upon and operationalizing one of the terms used in the value proposition.

The design-thinking approach generally includes separate generative and iterative processes. After an “ideation” or brainstorming phase to spin out as many different potential solutions to a problem as possible, the results are then reviewed and analyzed, and the most promising are rapidly prototyped. The goal is to manifest a version of the product quickly so that it can be tested and its shortcomings can be analyzed and corrected in a cyclical process of improvement. Our work on general education included both ideating and prototyping phases, allowing us to canvas the university community for ideas and feedback to ensure that diverse views and stakeholders were included in the process. By the time we had finished drafting and revising our value proposition, we had consulted all of the key players and interests and incorporated their perspec-



tives. The end result was a vision for general education based on consensus and common interests. Aside from some quibbles about wordsmithing, at this point we had arrived at a set of learning goals that everyone on campus could stand behind:

- **Curiosity:** Creating strategies for expanding knowledge through reflection and research.
- **Confidence:** Challenging concepts, practices and experts with reasoning and evidence.
- **Contextual Understanding:** Developing and sharing insights using appropriate means of expression.
- **Global Perspectives:** Navigating diverse environments and complex issues by managing multiple systems of knowledge and behavior.
- **Empathy:** Considering multiple perspectives to relate to others and strengthen communities.
- **Collaboration:** Achieving goals by integrating skills and knowledge in a team setting.
- **Initiative:** Taking creative and intellectual risks when exploring ideas and real-world problems.
- **Ethical Reflection:** Affirming an ethical compass to guide personal, civic, and professional life.

A BLUEPRINT FOR A CURRICULUM FOR ALL UNDERGRADUATES

Bolstered by this sense of shared interests, we moved forward to the task of converting the value proposition and its learning goals into the blueprint for an actual curriculum for all of our undergraduates. For this phase of the process, we recruited a team of five faculty members, which included the associate dean in charge of the existing general education core curriculum, the associate dean of the College of Science, Health, and the Liberal Arts (which delivered the bulk of the general education requirements), a faculty

representative from the core curriculum, and associate deans from the university's other two colleges: Architecture and the Built Environment; and Design, Engineering, and Commerce. The composition of this team ensured that we had experts on the structure and requirements of our current core curriculum as well as representatives of the professional majors, so that we could quickly troubleshoot any new strategies we were considering in terms of their impacts on the existing programs.

We commissioned this team to spend four weeks in June 2013 to design a delivery system for the new value proposition and asked them to report on their



progress at the end of each week to an advisory committee of academic administrators, students, student life officials, and representative faculty members. The process of ideating, prototyping, testing, and improving resumed—now on a weekly cycle—using the advisory committee as a focus group for the new approaches that our team was generating. The weekly Friday lunch meetings kept the team on task and allowed it to receive immediate feedback on the direction of its work. The advisory committee, for example, quickly shot down an initial concept involving the collection of digital badges based on a

passport/visa metaphor. Our team went back to its project room and developed a new eportfolio-based approach that became the foundation for our new Hallmarks Program.

Our intention in developing broad consensus-based learning goals was to define general education in an expansive way that would allow students to develop new competencies and track their progress across all of their university experiences, including cocurricular activities. In our vision of the eportfolio process, students would revisit the different learning goals multiple times by posting a relevant artifact for each one from a course in their majors, from a course in the general education core curriculum, and from their cocurricular experiences. Students would also be asked to post a short essay (around 250 words) that explained why they were connecting a specific sample of their work with a specific learning goal, and how their work illustrated their progress toward that goal. This stacking of artifacts and reflective essays was intended to create a triangulation effect, as students reconsidered each learning goal in several different contexts and began to see how connections could be made between their learning in different locations across the campus and in different semesters across their university careers.

ENCOUNTERING THE SAME LEARNING GOALS ACROSS THE CURRICULA

To create this experience of encountering the same learning goals in different places across the curricula, we needed to identify the points in each program where we believed that students could and would develop each competency. For the majors, this meant developing a curriculum map for every major program on campus that aligned each of the eight learning goals with at least one course that would



produce student work relevant to that goal. In the cocurriculum, we decided to allow students to choose any four of the learning goals to which they felt they could meaningfully link their experiences. For the third component, the general education core curriculum, the new program inspired a more ambitious transformation.

The existing core curriculum, the College Studies program, was organized primarily around disciplinary categories, such as Social Sciences, Humanities, and Historical Understanding. As we considered how to align our general education requirements with the new learning goals, we decided to restructure our requirement categories around themes and topics, rather than disciplines. The science and mathematics requirements still stumped us, so they remained unchanged. The result was requirements in areas such as American diversity, global citizenship, ethical reflection, and global diversity, with each category aligned with one of the eight learning goals. The combination of broad nondisciplinary learning goals with a defined set of requirement themes gave us a system of coordinates for curriculum development, similar to latitude and longitude measurements. New or existing courses had to meet at the intersections of the designated learning outcomes and the content themes of the requirements, so that student learning experiences would be comparable, even with different course selections in each requirement category.

We also assigned the new core curriculum the task of tracking and evaluating student progress in the development of their eportfolios. Our curriculum mapping for the majors and the core curriculum allows students to identify which courses are intended to help them produce artifacts, and we wanted to provide some checkpoints to encourage them to update their portfolios as they completed these courses. For that purpose, we designated one general education requirement in each

year of the curriculum as a “touchstone” course. In these four courses, in addition to the regular course content, the instructors would spend some class time reviewing their students’ eportfolios and assessing whether they were on target in terms of the courses that the students had already completed. As the touchstone courses progress from first year through senior year, the percentage of the final grade determined by the quality and completeness of the eportfolio increases. This approach ensures that students are guided and held accountable in the development of their eportfolios.

A COMPREHENSIVE CURRICULUM MAP

To complete this new core curriculum, we took the eight campus-wide learning goals and sub-divided each one into four more specific learning outcomes. This gave us a set of thirty-two learning outcomes that we then distributed across our thirteen requirement categories, making sure that each outcome was assigned to at least two different requirements. The result was a comprehensive curriculum map that could be used to organize an assessment cycle for the new general education core curriculum. By assessing two broad learning goals each year and tracking the four related outcomes for each learning goal into the various courses responsible for those objectives, we could collect relevant student work annually and complete the full assessment cycle every four years.

The new eportfolio process follows a similar schedule for assessing the broader general education program across campus. Because the eportfolio indexes each artifact according to which learning goal it addresses, it is easy to compile a representative sample of student work for a given goal for assessment purposes. We recruit a small team of faculty members from our different academic units to spend two

or three days after the end of the spring semester to score a cross-section of eportfolios with rubrics that measure students’ work in terms of how well they understand the learning goal and their level of achievement of that goal.

After four weeks of summer work, our team had produced a full vision for a new approach to general education and had gained the approval of our advisory group. When the fall 2013 semester began, we presented the proposal to the university faculty and solicited their feedback. By November, we were ready for a faculty vote. The proposal was approved by a 70 percent majority, with virtually none of the acrimony that can often accompany a reform of general education requirements. We attribute this outcome to the iterative approach that we took, both in developing and defining our shared learning goals, and in the design of the eportfolio process and the new general education core curriculum.

LEARNING GOALS FRONT AND CENTER

The result, which we launched with the 2014 incoming class, is a fresh and collaborative approach to general education that places our learning goals front and center: they drive the eportfolio process, shape the core curriculum, and are tracked to courses in every undergraduate major across the university. They also provide a framework for students to interpret and document their learning in the cocurriculum, helping them to articulate the role of these experiences in their university education. The collaborative process of formulating a set of shared outcomes required patience, faculty engagement, and administrative leverage from the provost’s office, but it produced rich dividends. The resulting framework for general education communicates our educational aims, coordinates our teaching efforts across the campus, and organizes, clarifies, and displays our students’ learning in a powerful way. ■

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