



# Transforming GE Courses from Predictive Contexts to Engage Unstructured Twenty-First-Century Problems

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For eighteen months, five faculty at Heritage University (HU) have participated in a project that features problem-centered learning and transparent assignment design with 1,172 graduate and undergraduate students, colleagues, and administrators in the Yakima Valley, Toppenish, Washington.

Partnering with the AAC&U Transparency and Problem-Centered Learning project, our team's purpose was to review, revise, and realign five courses (introductory biology, psychology, statistics, English, and freshman experience) within the general education (GE) curriculum with regard to problem-centered assignment design to optimize delivery and assessment of key assignments for transparency in evaluative measures and rubric design. As participants, we hoped to achieve relevance for each student and gain clarity with respect to expectations and assessment; on the global scale, we hoped to contribute to the university's retention goals.

As a first step, key assignments were revised for the "transparency course" and preserved for the "control course." There were two dimensions of change for the transparency course: expectations and assessment indicators of the class were expressed more transparently and assignments were designed to be problem-centered. Interdepartmental collaboration was invaluable for the revision process, as only colleagues from another department could achieve the objectivity and distance that reflects a student's experience with any given subject. Points of language and terminology, expected outcomes, specificity, connected

texts, format, exceptions, and critical perspectives were all pushed and challenged through group-generated affirmation and constructive conversation. A critical statement of one colleague about her work led her to admit, "I found that students were not prepared in class to have a very meaningful discussion of their work, and the assignment was often interpreted by students as 'busy work.' I'm hoping this new model will help students make more meaningful connections and be more thoughtful about their research."

Another shared, "I feel this assessment is a shotgun approach at measuring a small set of knowledge-based skills with little cognitive demand required of students, and lacks relevancy to the students' lives. I attempted to create ownership of the data set starting at the individual level and continued to broaden the scope of the data to a national level. Keeping in mind that the students need to feel some level of connectedness with the subject matter as the assignments develop, I added comprehension and analysis tasks to increase the cognitive demand."

It was only after wrestling to understand, as a team, what transparency would look like for our students that our group was able to plan the way forward. We chose several themes that are reflected in the comments above: meaningful application, relevance, and ownership. We recognized that simple, logistical facts such as how to turn in an assignment and when are often overlooked by instructors. With eyes to re-see, as students, the expectations and assessment indicators





glared with inconsistencies and ambiguity, verbose language, conflicting due dates, the necessity for inference, and impracticality.

The revised assignments carried a fresh air; nearly each faculty member was eager to present the transparent assignment, so much so that there were several conversations of ethics: was it ethical to continue with the muddled and ambiguous old assignment for a control group? For example, a department-wide summary response essay in English was notorious for student oversight. They tended *either* to summarize *or* respond, but not both, as the assignment required. The transparent revision was a scaffolded assignment divided into three parts to be submitted independently. The result was not an overwhelming success; students largely disregarded the initial summary and response portions instead opting to complete the final summary/response essay at the last minute. Grades did not improve, but the experiment did reveal new student biases and habits that could be improved.

The experiment was a success—at times it swapped inefficiency for inefficiency, yet it opened a conversation between faculty that resulted in new perspective: clarity comes with intentionality in assignment design, format, and content that reflects the world our students experience. It is the twenty-first-century way to re-see; text and ideas are as fluid as the flick of a button: Delete. Copy. Paste. Transparency is an active progress that begins and ends with collaboration.

As an evaluative measure, the project led our team to partner with Mary-Ann Winkelmes at the University of Nevada, Las Vegas and the Transparency in Teaching and Learning in Higher Education project to generate anonymous student survey results on the degree of transparency noted in both intervention and control sections of each course. The survey verified key concerns that we had wrestled with repeatedly in designing courses with transparency at the center: Where does transparency

stop? Is there a balance between concision and over-transparency? How do student learning styles and the variables of culture, class size, gender, and age impact the degree of transparency? Is the medium of delivery a factor—online versus in-person courses, pen and paper versus electronic devices? The survey results showed that the majority of student populations—first-generation and underserved—better understood the courses when the concepts were woven into the fabric of belongingness and community in a classroom. Greater hospitality for each individual correlated with both a student's

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confidence to succeed in school and his/her recognition of when to seek help or clarification. Creating a sense of belongingness and teaching student-centered lessons are highlights of our community and part of the educational value offered at Heritage.

Students were less likely to perceive courses as transparent overall. Survey questions such as, "In this course, I knew the purpose of each assignment," "My instructor identified a certain learning goal for each assignment," and "In this course, I knew the steps to complete my assignments" were answered with less success, indicating a host of potential improvements with regard to language, explicit university-wide learning goals that are consistent between GE courses, and a more seamless integration of GE skills into major courses to follow through with real-world application. The positive endnote for us as a team was the favorable responses to the question, "How much did the instructor value you as a stu-

dent"—this was a direct indication that we will not ever be complacent as a faculty with regard to opportunities for student growth and learning. Transparency is a concept that we have newly integrated into the vernacular of professional development and best practices at Heritage University.

Problem-centered learning, dimension two of the project, has long been a central tenet of AAC&U. AAC&U president, Carol Geary Schneider, delivered an address at Wagner College's Innovation Celebration in 2014 citing the prediction of economists from Harvard and MIT that the demand in

future career fields will increase for career-ready college graduates that are skilled in working "with what economists are calling, 'unstructured problems,' open-ended problems, problems for which we don't yet know the answer." The Problem Solving VALUE Rubric engages the critical thinking dimensions of coursework, promoting innovative strategies and the application of a single or multiple solutions in preparation for non-rule-based career tasks.

In aligning with this purpose, Jeffrey Thompson, professor of psychology, worked closely with AAC&U's project leader Ashley Finley to orchestrate a problem-centered assignment for his Psychology 101 course that played on the dimension of community problems and local engagement to divest psychology from an abstract, predictive context and move into the unstructured realities of the real world.

Finley's feedback on the initial draft assignment constructively aimed at this purpose: "Is





there a way to specify ‘community’ to connect more closely with students’ lives? Perhaps give an example of a local problem or issue or news-based issue that might be particularly relevant to the age of your students?”

The revised assignment, Thompson found, resulted in projects that altered the students’ expectations and predictions about community problems, prompting them toward feasible solutions, as characterized by the following students’ response: “I believed that marijuana would affect health but I wasn’t sure how. I believed that marijuana wasn’t just beneficial without having some consequences.”

In a thoughtful summation, she stressed the importance of spreading this information: “I have two brothers and several friends that smoke marijuana. And when I tell them to stop smoking, that it’s bad for them, they always say that marijuana doesn’t affect their health.” She concluded with a conviction to share her learned knowledge, “Now I know how marijuana can affect people.” Moving from problem to solution was seamless with the guided integration of the Problem Solving VALUE Rubric as Finley suggested, “You might want to adapt the form to more clearly highlight dimensions of the rubric.” The rubric became a key in moving students toward solutions without prescribing a hypothetical outcome: the problem remained open ended, and the solution creative.

Statistics was also a unique course to tailor to the problem-solving rubric as it lends itself to problems overtly. Our thoughtful statistics instructor, Tamera Wiley, latched innovatively to the attribute of problem-centered education that centrally places students’ real-world contexts as a premium learning device. In place of abstract data, students were urged to bring electric bills for analysis and given thought-provoking questions to address for the assignment extension, such as this one:

“Assume the federal government wanted

to adjust your electric rates and charge you according to the region in which you live? How would the new rates impact your monthly bill? How would that impact your annual expenses? What actions could you take to try to prevent price adjustment from occurring?”

Such questions emphasized problem-centered learning in a context that grounded understanding and not merely knowledge of abstract, computable data, effectively solving the question of “*why* is this important” for students.

To evaluate the experimental results and successes of the problem-centered assignment component, the team members worked both individually and as a collaborative entity to calibrate results on the AAC&U Problem Solving VALUE Rubric. One of the most useful bits of knowledge gleaned through this process was shared early on—that the VALUE rubrics have a front page. Complete with a defined purpose, a glossary with examples, and framing language, these context pieces became the governing feature of six intense summer weeks of scoring. While frustrating at times, the language led to discussion and a better collective understanding that our students are challenged when they are tasked with devising original and creative solutions. In effect, the LEAP Challenge’s emphasis on innovative thought for the next century is on target because across the board, from statistics courses to the university core, students at Heritage are only mildly prepared for twenty-first-century tasks, the “unstructured contexts” that the economists cited in Schneider’s speech foreshadow as necessary.

Both the transparency and the problem-centered pieces of the project came together in our unofficial analysis of the patterns revealed from the VALUE rubric scoring sessions: assignments without the problem-based component spelled out in transparent terms with clear directions; without evaluation procedures and guides, such as

rubrics or model assignments; and without overt problem structures with data sets or experimental guidelines, tended to be as low-scoring on the problem-solving rubrics as assignments without any clear problem-based objective at all.

The team has found that intentionality with assignment design is directly tied to student success regardless of the applicability or relevance of problem-based assignments, and therefore, as a group we remain in agreement that while each course will ideally integrate a problem-based assignment in the future, overall student success with meeting assignment criteria is accomplished through transparency.

Our inherent sense, collectively, is that thinking in a way that generates original information is somewhat incompatible within a learning system that still measures rule-based tasks. Ideally, the work environment would be replicated in the classroom, but writing, reading, computing, analyzing, and building are taught within guidelines, structures, and parameters that routinize the tasks for classroom reliability, instructor sanity, and systematized assessment targets. If this were truly twenty-first-century learning, the institution in all of its grandeur would embrace the fluidity of a conducive culture that molds to each student, personalizing education to the degree that we have come full circle and the apprentice learns at the knee of the carpenter, not in a classroom.

Therefore we recognize, as an institution, the necessity of offering organic, context-rich environments that will begin, for us, at the general education level. The revision of GE course outcomes for transparency and problem-centered learning will align knowledge and skill with major capstone courses to scaffold understanding. Enveloped by a sense of purpose that will remain with them long after they leave the classroom, students will learn that they are capable of a solution and will set their minds to find it in the mix of a liberal education curriculum. ■

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