

# More Than a Useful Myth: A Case Study of Design Thinking for Writing Across the Curriculum Program Innovation

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In May 2017, my university sent me to the Association of American Colleges and Universities (AAC&U) Institute on General Education and Assessment in Chicago, Illinois. In addition to enjoying the deep-dish pizza and rediscovering student life through sleeping in dorm rooms, I had the pleasure of hearing Stanford's Helen Chen, their director of e-Portfolio Initiatives, discuss the institute's theme: *design thinking*. At the time, I had been the director of my university's fledgling writing across the curriculum (WAC) program for two years, and while I was not at the institute in that capacity, I quickly went from being slightly skeptical about the concept of design thinking to, instead, not being able to ignore all of the ways in which design thinking could be employed in the context of WAC program design and sustainability. As Chen spoke, I kept seeing ways in which this concept could potentially invigorate our program.

As such, in this article, I argue that design thinking can be used as a strategy for addressing structural or curricular problems in WAC programs. I begin by describing how design thinking has been defined in other fields such as engineering and architecture. I then define the Stanford d.school's five modes of design thinking and discuss how I applied these modes to a design-thinking process in my own university's WAC program to address problems related to faculty resistance and meeting students' needs. I end by explaining how other administrators may use this interdisciplinary heuristic to analyze and wrangle with administrative WAC problems.

## Decoding Design Thinking

Put simply, design thinking is a creative problem-solving approach. It is typically employed in the context of architecture and art/design disciplines but has more recently been applied in engineering, business management, and education contexts as well (Matthews and Wrigley; Purdy; Rowe). Many companies, such as global design company IDEO and General Electric, now use design thinking as a tactic for inciting new innovations regarding anything from re-structuring departments to creating new products (Brown; Moggridge). At least in business settings, design thinking has proven to have favorable outcomes, including better economic performance in the marketplace (Matthew and Wrigley; Moultrie and Livesey).

Essentially, engaging in design thinking means applying a designer's mindset or sensibility to complex or "wicked" problems. Drawing upon the theories of Horst W. J. Rittel and Melvin M. Webber, Richard Marback writes in a 2009 *CCC* article that *wicked problems* are "not solvable through greater command of information. Wicked problems are wicked because they are never finally solvable" (W399). These ill-defined problems, according to *Design Thinking* author Peter Rowe, have no definitive formulation (41). In fact, Rowe suggests, different formulations of the problem at hand imply different solutions, and proposed solutions to wicked problems are not necessarily correct or incorrect because plausible alternative solutions could be proposed (41).

To contend with so-called wicked problems, designers are said to employ a design-thinking approach. Richard Buchanan, inspired by Rittel and Webber's wicked problems concept, defines design thinking as problem-solving activity but also as reflective practice, emphasizing the connection between theory and practice. In "Wicked Problems in Design Thinking," Buchanan takes a process perspective, breaking down four areas of the world in which design is explored—symbolic and visual communications (such as graphic design), material objects, activities and organized services, and complex systems or environments for working, playing and learning (Buchanan 9–10). In other words, design thinking is a reflective practice that can be applied to a wide variety of subject matters, processes, and products. While Buchanan's work is relatively theoretical, some scholars and practitioners have also made moves to formalize methods for engaging with design thinking. As James Purdy notes in "What Can Design Thinking Offer Writing Studies," John Chris Jones, who was the "founder of the design methods movement," established a three-step process: "diverge, transform, converge" (Purdy 627). For Jones, design begins with divergence, in which the designer brainstorms and researches, escaping old assumptions and discovering what the problem actually is that the designer is attempting to resolve (64). Transformation is a creative phase involving setting objectives, identifying critical variables, and finding patterns, which ultimately allows designers to define the problem (Jones 66). Then, convergence involves selecting an appropriate solution to the problem.

Tim Brown, CEO and president of global design company IDEO, also writes about specific design-thinking methods in his book, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*. Having successfully employed design thinking for countless projects in his firm, Brown suggests there are three "overlapping spaces" of design thinking: inspiration, ideation, and implementation (16). Perhaps inspired by Jones, Brown describes the inspiration space as the space in which ideas are gathered; ideation involves turning insights into ideas; and implementation means turning ideas into a concrete action plan (Brown 16). Brown also suggests that design thinking is a dance between four mental states: convergent

thinking (eliminating options and making choices), divergent thinking (multiplying options to create choices), synthesis (putting pieces together to form a whole), and analysis (breaking apart complex problems) (66–71).

Many of these ideas from Brown and Jones are present in the “design thinking” modes articulated by the Stanford d.school, which is the model that I use throughout the rest of this article. The Stanford model articulates five modes: empathize, define, ideate, prototype, and test. In the sections that follow, I describe these modes in more detail. No matter what method is being used, all design thinking practitioners emphasize that it is primarily about human-centered innovation (rather than technology or organization-centered innovation), and it is an iterative, collaborative process.

It is important to note that design thinking has been critiqued as well, with some suggesting it is little more than an empty buzzword. Don Norman, the founder and director of the Design Lab at the University of California, San Diego and former VP of advanced technology at Apple, writes in a 2010 online article that design thinking is a “useful myth.” Norman’s point is that design thinking is nothing more than a name for something innovators have been doing “throughout recorded history, long before designers entered the scene” (“Design Thinking: A Useful Myth”). In other words, breakthroughs in a variety of fields stem from people and processes that do not need to apply the term design thinking to what they do. Norman implies that design consultancies even use the concept as a public relations tool to mystify the work they do. Yet, Norman revisits his position a few years later in “Rethinking Design Thinking.” He suggests that while, yes, design thinking is practiced “in some form or another by all great thinkers,” in design, “there is an attempt to teach it as a systematic, practice-defining method of creative innovation” (Norman, “Rethinking Design Thinking”). For Norman, design thinking is critical as a way to encourage individuals and teams to “question the obvious, reformulate our beliefs, and to redefine existing solutions, approaches, and beliefs” (“Rethinking Design Thinking”). In short, design thinking is the application of a tried and true process for tackling complex issues and opportunities that is used by those with and without design backgrounds.

While the concept of design thinking is typically used in engineering, architecture, design, and even business management contexts, the concept has indeed been invoked in rhetoric and composition scholarship. Most notably, Carrie Leverenz argues in “Design Thinking and the Wicked Problem of Teaching Writing” that writing instructors should teach writing as a design process, create wicked writing assignments, and foster experimentation through prototyping. In “What Can Design Thinking Offer Writing Studies?,” James Purdy draws comparisons between the multimodal composing process and design thinking. However, design thinking, to my knowledge, has not yet been applied to WAC. While Purdy does acknowledge that design thinking offers a model for how we might think about situating writing in

the academy, his focus is more on the parallels between the composing process and design thinking as he codes composition journals for the different ways in which they invoke the concept of design (620). In this article, I want to suggest that design thinking can be applied productively to WAC administration, specifically.

While most of the WAC literature focuses on practical tips for program administration based on narratives of experienced administrators or on theorizing writing pedagogy rather than program administration, Michelle Cox, Jeffrey Galin, and Dan Melzer's recent book, *Sustainable WAC: A Whole Systems Approach to Launching and Developing Writing Across the Curriculum Programs*, does theorize program administration, drawing from theories outside of the field. Cox, Galin, and Melzer offer a theoretical framework for WAC program development grounded in complexity theory and systems theory. While systems thinking and design thinking developed independently in different fields (engineering/biology versus architecture/design, respectively), these approaches have some similarities and even overlaps. Systems theory involves thinking at the institutional level about the ways in which systems shape behavior (Cox, Galin, and Melzer 17). It is a recursive process that requires involving "actors in the system" in an attempt to "paint a rich picture of the system" (Cox, Galin, and Melzer 32). To employ this approach, for example, the authors describe a WAC director gathering a group of stakeholders to consider their goals for writing on campus, create alternative models for the system, and look for points of leverage for making change. In many ways, a design-thinking process would look similar. One of the major differences is that in systems theory, the stakeholders are the designers (in this case, the WAC director and, say, a campus writing committee), whereas in design thinking, the stakeholders are those observed and studied by the design team, such as students and faculty (Pourdehnad, Wexler, and Wilson). In other words, design thinking seems to more strongly emphasize a human-centered approach involving empathy with "users"—or the individuals/group for which one is designing. Another difference is that while systems thinking is more about seeing wholes (interrelationships rather than things (Shaked and Schechter), design thinking involves a "dance among four mental states"—convergent thinking, divergent thinking, analysis, and synthesis (Brown 66–71). Yet, the holistic approach to analyzing a system that is embodied in systems thinking can augment the creative idea development process of design thinking with greater consideration of the complexities of a system and power dynamics. Systems thinking may be more valuable for initial program development, but design thinking can be rather quickly (depending on the context and goals) and cheaply applied for innovation at any stage of a WAC program's lifespan. Brown reminds readers about the value of design thinking when he says, "Design thinking taps into capacities we all have but that are overlooked by more conventional problem-solving practices" (4).

## The “Wicked Problem” of WAC

If design thinking is supposed to be applied to wicked problems, then the first question we as administrators might ask ourselves is, “Is WAC a wicked problem?” I would argue that both the acts of implementing and sustaining a WAC program can pose a variety of wicked problems worth exploring, and using wicked problems as a construct for understanding problems in WAC may allow us to address these problems differently.

There are a variety of common problems that WAC program administrators find themselves faced with. Many struggle with how to assess program effectiveness or monitor instructor compliance (Bazerman et al.; Carter; Cox, Galin, and Melzer; McLeod); how to deal with resistance from chairs to support faculty course releases or lower class caps or resistance from faculty who are frustrated by top-down, administratively launched curricular initiatives or who feel overburdened (Sandler); how to work with faculty who may be overly focused on grammar instruction to the detriment of higher-order concerns (Cole); or more generally how to deal with disciplinary differences in writing conventions and pedagogical approaches (Sandler). Some are faced with questions of who owns WAC and where WAC should be located in terms of place or administrative affiliation, and others worry about student perceptions of writing-intensive courses, noting that students (often at the advice of advisors) shy away from these courses due to concerns that the courses are more work (Cox, Galin, and Melzer 82–85). The sustainability of WAC programs is also an important issue arising in recent books and articles, and many of the above problems are why administrators worry about the sustainability of their programs.

These issues can be considered wicked problems because there is not necessarily one correct answer. Various solutions can be provided, and sometimes the actual problem itself is difficult to define. The problem also changes shape depending on the stakeholders under consideration, and the problem itself may change as one works to try and address it. Possible solutions to the problem also vary depending on the context. Traditional processes cannot solve wicked problems; these problems, in fact, cannot be indefinitely solved but they can be moderated or tamed. To illustrate, consider the question of where WAC should be located in terms of administrative affiliation. Does WAC belong to the English department? Should it reside in a center for teaching and learning (CTL)? Should it be run by a full-time administrator or a faculty member with a course release, and who does the director/coordinator report to? Different stakeholders would have different answers to these questions, and their answers are not necessarily right or wrong. Based on a concern that few faculty are participating in the WAC program, the Provost may pull WAC out of the English Department and into the CTL because he feels faculty across campus do not see WAC as interdisciplinary, but this may cause problems for the English department faculty who feel writing

is their territory. Perhaps the move out of the English department does garner broader interdisciplinary participation, but the director, who has an English background, leaves out of frustration, and a director who lacks a writing background opens up new problems. Perhaps the problem was not really about faculty disliking that WAC was owned by the English department and the move to the CTL does not boost participation—hence the problem itself was not clearly defined. Perhaps engineering faculty do not want WAC under English but business faculty do, so the problem changes shape depending on which faculty are being considered.

Looking at WAC problems as wicked problems might, at first glance, cause an administrator to think that she should not even bother trying to work on these problems because they seem so impossible. However, this construct should actually empower us to feel that we can manage problems while reminding us that it is perfectly acceptable that we will be unable to find one perfect answer. In other words, the wicked problem concept has the potential to encourage administrators to tackle a problem that they might have otherwise deemed beyond their control or abilities. Identifying a wicked problem in WAC administration can remind us to focus on a specific user (the person or group for which we are trying to solve a problem) and to design a “solution” based on the specific stakeholder we want to address at any given time. Designating these problems as wicked also helps us to consider all the various complexities inherent in a problem and reminds us that new problems will emerge as we work on taming the initial issue; the wicked construct can help us troubleshoot and plan ahead. Ultimately, design thinking, and particularly the five modes I discuss in the next section, will help WAC administrators wrangle with these wicked problems. Yet, as Barbara Walvoord notes in the “Getting Started” chapter of Susan McLeod and Margot Soven’s *Writing Across the Curriculum: A Guide to Developing Programs*, we should avoid the problem-solution model of WAC because if “WAC is seen only as a solution to a particular problem, then everyone expects that, if WAC is successful, the problem will be solved and WAC can end” (11). While the concepts of wicked problems and design thinking deal with the notions of problems and solutions, these concepts actually allow us to avoid this problem-solution model because they remind us that the kinds of problems we are faced with will continue to transform, and we will need to continually innovate, collaborate, and adjust.

At my university, there are a variety of wicked problems that I could attend to, but in this article, I focus on the most pervasive—which is the university’s inability to offer enough writing-intensive courses to meet student demand. First, I will offer some context about our program and my role in its leadership. I started as the writing across the curriculum director at the same time that I first joined the faculty as an assistant professor of English. The university was in the process of implementing a new core curriculum, which would include one writing-intensive (W) course that all students

would be required to take prior to graduation. As part of this change, the university removed one of our two required first-year writing courses. As a new faculty member, I was not privy to many of the conversations that led up to this change. I was not clear on the motivations behind the decision to implement WAC, nor did I know who made the decisions. Even after asking a variety of stakeholders to clue me in, I never really received the solid answers I was looking for. It *was* clear to me, however, that many faculty were resistant to this change. The “good luck with that” joke and chuckle that accompanied any conversation I had about WAC was a good indicator, and I was also warned by my chair and a Core Curriculum Task Force Committee that it would be difficult to get some chairs and faculty on board.

The major aspects of the “W” requirement and certification process were decided on before I arrived. We have a WI-based WAC program that follows an instructor-based approach, meaning that the W course designation is attached to sections of courses taught by instructors who have participated in our full-day orientation workshop and completed a course proposal. The proposal requires faculty to demonstrate how their courses meet the W requirements, such as that instructors should offer explicit instruction in writing, assign writing to learn (WTL) activities, give feedback on writing, and engage students in revision. During the semester they teach the W course, faculty are also asked to attend one 1-hour workshop to continue the professional development opportunity. W sections are currently a mix of general education courses and upper-level courses in the major, and section offerings have grown from ten to approximately twenty-five a semester, but by next year (AY 2019–2020) we need to be at around forty sections per semester to meet student need. When I arrived, I wrote a proposal to the provost to request a faculty stipend for those who would teach W courses, and the negotiated result was a \$500 “start-up” stipend offered once—hence, the stipend is associated with participation in the workshop and proposal process and paid out during the semester the faculty member first teaches the W class, but faculty who teach courses again do not receive any compensation or release. Based on what was agreed to in relationship to the stipend, I was quite concerned about the sustainability of the program. Some faculty were motivated by the twenty-person class cap, such as history faculty who already taught writing-heavy sections with 30–35 students, but others’ courses were already capped at 18–20 for a variety of reasons.

By the time I was introduced to design thinking, my initial sense of my program’s wicked problem was that we did not have enough W-designated courses to meet the core curriculum requirement, which was ultimately a question of program sustainability. Given that sixty-two percent of the National Census of Writing WAC program respondents indicate that their institutions require all students to take writing-intensive courses taught by departments other than English or writing, this is likely

a common problem. This problem also seems straightforward at first glance, so why did I consider this a wicked problem? Primarily because there was no easy answer and because different formulations of the problem would require different solutions. For example, the problem could have been that we did not have enough courses because my communications and recruitment were not effective, or, instead, we did not have enough courses because faculty wanted compensation for teaching the courses because they perceived them to be extra work. It could have been that faculty did not want to deal with students' resistance because many of our students did think W courses were "more work." The issue could also have been that department chairs could not afford to cap classes at twenty students. These different formulations of the problem would obviously lead to different approaches to a solution. Depending on the variety of problems and the different stakeholders facing these problems, I would need to tackle the issue in different ways—and I did so by drawing on concepts from design thinking.

## A Case Study in Design Thinking for WAC

To apply design thinking to WAC, I used the Stanford d.school's design-thinking model—not only because it was the model that influenced me at the AAC&U Institute but also because it is arguably the most prevalent contemporary model invoked by businesses and academics, as Stanford is "at the forefront of applying and teaching Design Thinking" (Interaction Design Foundation). While these modes—empathize, define, ideate, prototype, and test<sup>1</sup>—are typically presented in order, they are intended to be iterative. In what follows, I define each mode, and after the mode's definition, I explain how I used that mode to tackle my program's wicked problem. While I wish I could share that I have engaged in a full-scale design-thinking process with a large team and measurable results, my own attempts at and successes with design thinking are certainly a work in progress; however, I would like to share a few elements of how design thinking informed some innovations on my campus.

### 1. *Empathize*

The first mode, empathize, is perhaps the most important of all modes because of its emphasis on a human-centered approach to creative problem solving.<sup>2</sup> Before a

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1. Some scholars, such as Purdy, draw on a six-step process delineated by Jim Ratcliffe on the d.school K–12 wiki, but the most current instantiation by Stanford has five steps. Ratcliff's model includes understand, observe, define, ideate, prototype, and test. The current model takes "understand" and "observe," lumping these into the category of "empathize."

2. Many of the tools and methods mentioned in this section are drawn from the Stanford d.school's "Design Thinking Bootleg Deck," which is the latest iteration of strategies available on their website that were created by students, faculty, and designers from around the world.



designer can solve a problem, she needs to identify the user (the people for which she is trying to solve a problem) and truly understand their concerns. In this mode, the designer (1) *observes* users in the user's context, (2) *engages* users through interactions such as interviews, and (3) *immerses*, which essentially means that the designer wears the user's shoes, aiming to personally experience the reality of the user (d.school Hasso Plattner Institute of Design at Stanford i).

In this mode, the designer is supposed to assume a beginner's mindset by avoiding value judgments, questioning everything, finding patterns, and truly listening (d.school Hasso Plattner Institute). It is suggested that asking many "why" questions will help designers access empathy. This process ultimately is intended to help designers (in this case, WAC/WID directors) "grasp the needs of people you are trying to serve," according to Brown (9).

The elements of design thinking that inspired me the most, when I heard Chen discuss the concept, were the empathy mode and the iterative nature of the process. As such, I came back from learning about design thinking inspired to learn more about the faculty I work with and embracing the fact that I should go back and make changes to my program based on what I learned from these insights. This is not to say that prior to learning about design thinking, I did not care about or think about the faculty across my university. Quite the opposite. In fact, there were likely times when I worried too much about what they thought or felt; however, I had not specifically taken an opportunity to be *strategic* about determining their needs and feelings.

To engage with the empathy phase in my own design-thinking process, I first had to determine my users. Although the ultimate issue was related to students' needs, my users were faculty—faculty who I needed to continually teach W courses so that we could offer enough sections. Having the empathy mode in the back of my mind helped me to see that I needed more one-on-one time with the instructors where I gleaned their emotions about the program without allowing my own insecurities, biases, or assumptions to get in the way. To observe, engage, and immerse, I made a key change to my normal program structure. In lieu of our typical one-hour required mini workshop, I instead asked each faculty member to come to a 30–45 minute meeting in my office. By this time, I felt that I had a strong enough relationship with most of the faculty (I was in the third year of my program) that they would understand my intentions were not to police them but to learn from them. Luckily, I did have some program dissenters in this group because a few of the faculty had been strong-armed into the program by their chairs. This allowed me to garner the perspectives of a range of faculty. While I framed these meetings primarily around me being a resource for them, I also took the opportunity to engage them by asking many questions about

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the workshop and course development process, how their course was going, what concerns they had about students' writing, if they would continue to teach W courses in the future, and why or why not. Especially for those who were resistant to being a part of the program or were not likely to teach a W course again, I was reminded by design-thinking principles to dig deep—moving beyond just the fact that faculty were resistant to trying to discover the exact *sources* of the resistance.

I also asked them to bring in course materials, such as a graded student paper or a rubric or a writing activity handout, so we could workshop their materials. This also enabled me to observe them in context. While this is not quite the same as sitting in on one of their classes or asking them to use a think-aloud protocol while grading (these strategies would perhaps better embody the “observe” category of the empathy mode), I selected an approach that felt natural and embedded in the local context. It did allow me to put myself in their shoes as I looked at the writing they received from their students or learned about their assessment struggles.

Another way I learned from stakeholders in the empathy phase was to begin surveying them. Much like I am sure other WAC directors do, I created a post-workshop survey, a student-experience survey, as well as a survey sent to department chairs for feedback about the process. I also held “WAC open office hours,” or information sessions, that were open to anyone on campus. The main goal was to answer questions about the W process, but it also gave dissenters the opportunity to give me feedback on the program. While these information sessions were not terribly well attended, I did get the opportunity to speak to a few people who might have otherwise never taken the opportunity to present me with their perspective.

These informal interviews, surveys, and information sessions helped me gather a range of opinions and insights, looking for patterns that helped me formulate a more specific problem definition, which I discuss in the following section.

## 2. *Define*

After a designer engages with the empathy mode, she begins to *define* the problem. It is important to use the insights gleaned from the empathy mode in order to carefully craft a definition of the problem at hand. Rather than just calling it a problem statement, design thinkers call this a “point of view,” which is an actionable problem defined by the user insights (d.school Hasso Plattner Institute ii). A strong point of view, according to the Stanford Bootleg Deck, allows for the generation of many possibilities and preserves emotion. In defining the problem, the Stanford team suggests describing the user and choosing your favorite insight that “represents the most powerful shift in your own perspective,” then articulating what would be game-changing for the user, assuming the insight is correct (11). Perhaps the tip most poignant to WAC administrators is the d.school's assertion that a good point-of-view is one that

“saves you from the impossible task of developing concepts that are all things to all people” (“An Introduction to Design Thinking” 3). How many administrators have tried to come up with a solution to a problem that makes everyone happy and ultimately failed? Design thinking emphasizes that a strong problem statement narrows the issue enough that the administrator does not have to please all people—only the specifically identified stakeholders on a specifically identified, actionable issue.

For my own design thinking activity, I used what I learned in the empathy phase—from the surveys and interviews and discussions of course materials—to more clearly formulate a problem. Based on what I learned in the empathy phase, the clearest two issues I could see were that (1) faculty felt insecure about how to manage the grading load and give enough in-class time to instruction about writing, which made them not want to teach a writing-heavy course, and (2) they felt teaching this type of course was extra work with little compensation. What came as a surprise to me was that a course release was considered much more valuable to most faculty compared to a stipend. The emotions behind this seemed to stem from faculty feeling overworked and undervalued, which is certainly not an uncommon phenomenon. I was also not surprised that the faculty members were concerned about the grading load, but I was not aware that so many were struggling with finding time to offer explicit writing instruction in class or that this issue was enough to make them not want to run a W class. Because writing is the content in most of my courses, it was difficult for me to get past my own biases and common practices to realize this was an issue. I was also surprised to learn that the faculty did not have a problem with our instructor-based approach because they saw how people teaching other sections of the same course may not use writing pedagogy strategically, and they did not have a problem with the proposal process, which was something I had worried was burdensome for the faculty and could cause them not to create a new W class.

As such, I had a more unique point of view to work with moving forward, one that allowed me to focus on specific issues and get rid of certain concerns of my own that I realized were not major problems. According to the Interaction Design Foundation, a good problem statement focuses on your users’ need rather than your own. So, I had to keep faculty’s needs in mind above my own need for more W courses. While my wicked problem was the overall issue needing resolution, my point of view as I moved into the ideate phase was slightly different. According to the foundation, designers need to combine three key ideas: user, need, and insight. Applying this to my scenario, my problem may have been defined as such: Faculty (*users*) need to feel adequately compensated and supported (*need*) because they are concerned about the grading load and having adequate time to offer writing instruction in class, and they ultimately feel undervalued (*insight*). This problem was defined broadly enough to allow for the generation of multiple ideas, but it was specific enough to be approachable.

### 3. *Ideate*

The next mode, *ideate*, is where ideas are born. The key to ideating, in design thinking terms, is to come up with ways to solve the actionable problem statement by generating as many ideas as possible, suspending judgment (Purdy 627). As such, the goal is quantity over quality, and most of the literature on design thinking argues that design thinkers at this phase should not initially consider constraints (a difference between design thinking and systems thinking) so that they can move beyond obvious solutions. One of the goals of ideation includes uncovering “unexpected areas of exploration,” likely because constraints are not there to impede great ideas (iii). Yet, in some models, such as Tim Brown’s, constraints are acknowledged, but in a different way than a more traditional approach to change. Brown suggests that designers discover which constraints are important and establish a framework for evaluating them. These constraints—feasibility, viability, and desirability—are overlapping, and a design thinker is to bring these in balance (18). With any model, the key seems to be to avoid letting a particular constraint get in the way of innovative ideas. In other words, designers should at least avoid passing judgment or evaluating ideas in the early phase of idea generation because the best innovations often stem from what some may view as bizarre ideas. As Brown notes, starting with the constraint of what will fit within current models makes change slow and incremental (Brown 18–22). Designers begin to build constraints back in more strategically as they begin to prototype and test.

Most of my program’s ideation phase was conducted with the help of our first-year writing director and our writing programs coordinator, in addition to a session with my campus WAC committee. One particularly fruitful session during a reading day involved mapping out on a whiteboard our programs’ (writing across the curriculum, first-year writing, and the writing center) successes, goals, gaps, and connections, and considering innovative possibilities. We also worked to ensure that what I had learned in the empathy phase was connected to the ideas we generated. We produced a wide variety of ideas focused on our defined problem. It was quite difficult to avoid passing judgment and throwing out ideas that did not seem feasible, but having design thinking in the back of my mind did help me focus on avoiding assessing quality in the early phases. This is the point in which, during any normal change process, I likely would have thrown out some of the ideas that we ended up succeeding with.

We selected three main ideas to move forward into prototyping. The d.school recommends creating voting criteria, such as “the most likely to delight,” “the rational choice,” and “the unexpected” (“An Introduction to Design Thinking”). While we did not use these specific terms to categorize our ideas, we did ensure the ideas ranged from practical to risky.

1. Our most “outlandish” or “unexpected” idea was to propose what we called a W banking system. Faculty would be able to “bank” credits each time they taught a writing-intensive course, and after four credits they would receive a course release, during which time they could catch up on research or work on designing new courses, and so forth. This idea was risky because it would be costly to backfill courses and was unlikely to get support from central administration; however, while I normally would not have let this idea even come out of my mouth, we aimed to take it seriously in the prototype phase. We felt that this idea could address the issue of faculty feeling better compensated and valued for their work.
2. Another idea, the “rational choice” in the d.school’s terms, was to ask for more top-down support from the provost and deans, simply beginning to make it an expectation that faculty regularly participate in these processes. Part of the idea was to request that the expectation to teach a W course be built into the faculty handbook and into new faculty orientation. I had already been making suggestions along these lines, but the problem was how to make this happen in a meaningful way (or how to make administrators listen).
3. The third idea, perhaps the “most likely to please,” was the implementation of a writing fellows program. While there are many different instantiations of writing fellows programs, our goal was to make fellows available only to writing-intensive faculty, and the fellows would be experienced writing center tutors who would work closely with W faculty to offer writing workshops to students focused on discipline-specific writing strategies articulated by the faculty member. We felt this option might best help support faculty who were concerned about the grading load and in-class instruction, as the tutor and faculty member could collaborate about how to improve student writing and move some instruction outside of normal class time. (Importantly, writing fellows do not grade for the faculty.) While many other universities already have a writing fellows program, our university writing center was only a few years old and without this process, we likely would not have made a step in this direction for a few more years because we were perhaps not as aware of faculty needs . . . or perhaps not as willing to take on risks.

#### 4. *Prototype*

When a good idea is selected (or, ideally multiple ideas are selected), designers begin to *prototype*, which simply means to put the idea into any physical form. While this seems the most obvious for products, almost any idea can be prototyped. A new

organizational structure for a business can be plastered up on Post-It Notes, or a role-playing activity can be designed to enact a new way for handling customer service scenarios. A design-thinking prototype should be created cheaply and relatively quickly. According to Brown, a prototype “should only command as much time, effort, and investment necessary to generate useful feedback and drive an idea forward” (90). This quick approach is due to the fact that the purpose of prototyping is to generate conversations and allow the team to learn, explore, and test. Brown even notes that a more refined prototype might not receive as much feedback because it feels complete. In fact, prototyping is often conducted on multiple ideas to help a team decide which to move forward with.

We began prototyping for our writing fellows program idea by using a mind-mapping approach on a whiteboard and then later composing an outline. This outline turned into a proposal written by our writing programs coordinator to myself and the first-year writing director about the ins and outs of the writing fellows program. Once we gave our coordinator feedback, we asked her to then turn it into a more formal proposal directed at the provost, which would include some changes in our overall budget request for the upcoming year.

For the banking system idea, I again used the genre of a proposal for prototyping because a proposal would eventually have to be directed through the provost. As the d.school recommends, I used this proposal prototype to “start a conversation,” “test possibilities,” and “problem-solve” (“An Introduction to Design Thinking”). As I worked on the prototype proposal, I decided that this idea would have a better chance of getting off the ground if it was framed around our university’s emphasis on expanding high-impact practices (HIPs). As such, I started conversations with our service learning director, common course coordinator, and honors program director to test possibilities. We refined the idea to suggest that faculty who taught four high-impact courses (service-learning, honors, common course, writing intensive) could bank credits towards an eventual course release within a three-year timeframe. We created a variety of stipulations and requirements, and we added a portfolio requirement for students and faculty for program assessment. Portfolios were something the university had wanted but had been unable to get traction on, so we felt this was a good opportunity to garner further support by connecting our proposal to broader university goals. Another major university priority that had not been getting enough traction was our goal for a center for teaching and learning (CTL). As such, as we prepared our “high-impact practices incentive package,” we described how we envisioned this opportunity leading to the creation of a CTL in which those instructors being honored for teaching high-impact courses would become CTL teaching fellows.

Related to feasibility, a major constraint we came up against as we prepared our prototype was that even if we created this incentive for faculty, we could get

bottlenecked by chairs because getting buy-in for our courses is related to department needs. In this way, creating the prototype actually led to a redefinition of the problem because chair buy-in was not originally an issue that I discovered in the empathy phase. To offer an example, W and service-learning courses are capped at twenty, so chairs cannot always afford to cap classes at twenty because they have to find adjuncts to teach additional courses or sometimes have courses they cannot staff with adjuncts. As such, we also wrote into the proposal different ideas for department-level incentives; these ideas ranged from priority classroom selections for departments offering the most HIP courses to small budget increases for the most active departments, with the extra money going towards taking students to conferences. It was incredibly helpful to involve the other campus administrators in this process, as they each brought unique ideas and reminders of constraints to the prototype phase.

For our second idea related to top-down support, we used a white board and Post-It Notes to begin drafting what we called a “quota system.” A major challenge with getting top-down support for WAC in the early stages at my university was that there was no accountability. For example, a dean could strongly encourage departments to start creating W courses, but the departments were not being required to do so and nothing negative happened if they did not participate. Of course, it would be terrible if the university could not meet student need, but somehow because this was everyone’s problem, it was also no one’s problem. Our attempt with a quota system was to arm the provost with specific numbers the university would need. When we ideated, we came up with different approaches, such as asking for an even number of W courses to be taught across all five of our colleges, making it a requirement that each faculty member teach one HIP class each year as part of their yearly contract, and so forth. Yet, we finally settled on the following: We first determined how many W courses were needed across the university, and we then broke that down by the *percentage of instruction* offered by each of the university’s colleges. That then gave us a recommendation for the approximate number of W sections each college should offer. While this was only a rough estimate, it would give us something to work with that held each college accountable based on the amount of courses taught overall within the college.

As we prototyped, we began to see two ideas merging together. The quota system was helpful but still did not necessarily offer much motivation on its own. As such, we worked the quota system into our high-impact proposal, suggesting that a college’s ability to meet these numbers would also serve as a way of measuring the proposed department-level or college-level incentives. Remembering to always go back to what we learned in the empathy mode helped us stay on the right track as we continued making changes to the proposals. We saw that we needed more than one solution,

as the Writing Fellows program would give more pedagogical support while the HIP proposal would help faculty feel valued and better compensated.

### 5. *Testing*

The final mode, testing, means taking the opportunity to receive feedback on the prototype and refine the solutions. The Stanford team suggests, “Prototype as if you know you’re right, but test as if you know you’re wrong” (v). In other words, the testing mode is the time to be critical and consider the feasibility of the prototype. This mode may indeed reveal that the designer has framed the entire problem incorrectly. It can be useful to let the user experience the prototype without the designer offering a lot of context that could influence the user’s experience.

For my context, testing was difficult because we could not exactly enable users to experience our prototypes. However, we did share our ideas with as many constituents as possible throughout various phases in the process (W instructors, department chairs, associate provosts, the faculty senate chair, and more), and we did so even when our ideas were early, sketchy drafts. One important decision we made was to call both the writing fellows program and the HIP incentive packages “pilots,” and as such, we will be testing them, learning from users, and likely going back to the drawing board as we learn, engaging with the recursive nature of design thinking. Figure 1 shows a visual representation of the design-thinking process for our program’s particular wicked problem.

Again, perhaps one of the most important points about the design-thinking process is that it is iterative. As figure 1 shows, testing and prototyping were particularly iterative for us because we continually made changes as we received feedback. At every step, the WAC team should consider how what they learn in one mode informs the other and may require changes to ideas, solutions, or prototypes.

I am pleased to share that the writing fellows program was easily approved. W faculty already eagerly signed up for our pilot, filling the program within an hour of the invitation email. We feel that this additional layer of support will motivate faculty and help them feel supported. A much larger win for us will be the HIP proposal. It was indeed tentatively approved by the provost and shared with campus deans and associate provosts. The potential budget impact is now being explored by campus stakeholders, and while we have not yet been guaranteed that this program can begin in fall 2018, it looks promising. Perhaps even more significant, talks of a campus CTL have ramped up largely in the context of these conversations about the incentive proposal. We feel these programs will connect well to the concerns that were prioritized during the empathy phase.



## "Wicked" Problem: Program Sustainability Through Adequate Course Offerings

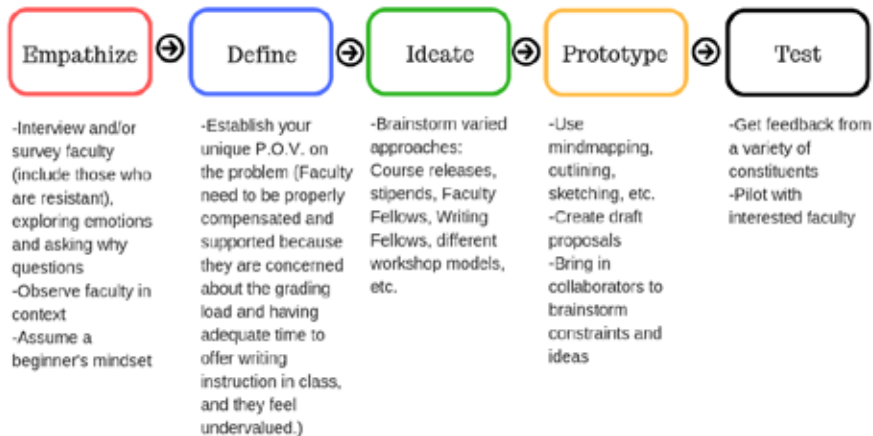


Figure 1. Design Thinking Map for Program Sustainability Issue

Given that wicked problems are shifty and never fully resolvable, we know we will need to continue to innovate. It remains to be seen if these initiatives will meet the goal of satisfying students' need for W courses, but we are confident that our approach is directly connected to faculty's concerns. We also have back-up plans in place in case our HIP proposal does not get final approval, and many of those ideas were also part of our ideation phase. However, the design thinking process certainly got us further than we would have gotten without it.

As I have noted, my own foray into innovation was certainly inspired by design thinking, but I also did not come close to exhausting the different ways in which design thinking can be applied to a variety of scenarios. There are many other innovative ways of working through wicked problems with design thinking. In the empathy mode, WAC directors could observe a faculty member while he or she grades papers using a think-aloud protocol. The director could run a W class herself or try to write a paper in another discipline in an attempt to "step into the students' shoes". She could partner instructors for classroom observations and collect and analyze the results to garner empathy insights. In the prototype mode, administrators can use mindmapping, sketching, outlining, storyboarding, and even role playing, such as acting out

a committee's reactions to a new process change. Testing can occur in a variety of ways—from users actually using a mock product to users reviewing the org chart for a new reporting structure and offering feedback. The WAC director may sit in on a class if a new classroom pedagogy is being tested. There are innumerable ways to enact the five modes.

## Applications for WAC Administrators

Design thinking allows WAC administrators to learn more about their programs and their problems with an eye toward focused solutions. The empathy mode encourages WAC administrators to (1) avoid bringing in their own biases or assumptions and (2) experience what their local users experience by actually witnessing their feelings, emotions, and challenges, rather than making educated guesses about these aspects of the users' experiences. The define mode allows administrators to hone in on a specific problem, making it more manageable and focused. This mode also encourages administrators to ensure that the problem definition is strongly connected to the empathy insights. The ideate mode allows for the generation of radical ideas. (Let's allow students to run WAC workshops. Let's get rid of workshops and move to departmental consulting.) The uniqueness of design thinking here is that the administrator is encouraged not to let typical concerns (about budgets, resources, staffing, etc.) get in the way of innovative ideas. Administrators can learn from the prototyping mode that their ideas are doable, and they can begin to problem-solve and diagnose the roadblocks they may encounter along the way, addressing feasibility and viability. From a heuristic point of view, administrators also learn from testing not only through the opportunity to receive feedback on their ideas but by getting the reminder to determine if the ideas actually meet the needs and desires revealed in the empathy phase, as well as if the ideas match the original problem. Prototyping and testing also allow administrators the opportunity to make progress with an idea but to avoid the pitfall of devoting exorbitant amounts of time to a solution that will never come to fruition or that will not bring about change.

As Don Norman notes, people who know a lot about their field tend not to question the fundamentals of their knowledge ("Rethinking Design Thinking"). The goal with design thinking is to allow designers to question their basic assumptions and do so in an informed way led by insights from stakeholders. As writing program administrators, we may not always question the basic fundamentals of composition pedagogy, and in some cases, a particular instructor's context or a particular discipline's conventions may require different ways of thinking about composition pedagogy best practices; design thinking can remind us to question some of our assumptions and redesign programs (or start up programs) with others' values at the forefront.

Of course, there are limitations to the design-thinking process. Perhaps the chief among them is time. It is not easy to find the time to engage in these activities and to find others willing to do so. One important thing to remember is that design thinking is, by nature, collaborative. Maybe directors/coordinators can enlist their on-campus writing committees or devoted instructors in their programs or even students (through an experiential/service-learning type of classroom opportunity) to conduct observations or interviews. Another important thing to remember about design thinking is that it focuses on the users and the unique problem/point of view. As such, as administrators, we should pick and choose which tactics we can employ that are manageable and tailored to the user and problem we are focusing on at the moment, thus narrowing the scope of the work. Another frustration with design thinking is that some of the ideas that generate the most excitement may end up not working once constraints are built back in. However, even implementing small elements of this overall framework into one's approach to WAC program development and sustainability may help foster innovation.

### **Design Thinking as Empowering Mindset**

Readers may wonder if I really needed design thinking to make the changes I have described. For me personally? Yes. For others? Perhaps yes, perhaps no. The question itself harkens back to Don Norman's early critique of design thinking as a "useful myth," when he argues that it is simply what innovators have been doing throughout recorded history. Yet, when Norman doubles back on this critique a few years later, he suggests that design thinking is unique in that it offers a "systematic, practice-defining method of creative innovation" ("Rethinking Design Thinking"). For me, the value of design thinking came from adopting it as a strategic mindset. It empowered me to explore opportunities that I normally would not have given more than a moment's thought. I cannot emphasize enough how getting the provost to make steps forward with the HIP proposal was a huge win in my campus context, and I simply cannot imagine myself having moved forward enough to come up with a viable proposal if I had not been influenced by the creative practices of design thinking. Specifically, taking the extra step to collect strategic data in the empathy phase, and then using those narratives to inform not only my prototype but the actual presentation to the provost, were both extremely helpful. Actually sitting down and "prototyping" my ideas also made a big impact on the process, and frankly, just having a name and strategy for this approach forced me to take the time to engage with some of these activities. As I continue to work with design thinking in the future, one thing I can improve upon is immersing myself, learning how to put myself in the shoes of the faculty with whom I work. I also can see opportunities for more creative prototypes as I take more time

to engage with the process, and I need to work on bringing in collaborators early in the process.

Of course, design thinking is not the only way to approach innovation in WAC, and others may find different approaches more suited to their personalities or goals. However, the systematic, iterative, human-centered, empathy-driven modes of design thinking, I argue, can be usefully applied to a wide range of problems that we may encounter in our programs. Design thinking offers a different way of thinking about and tackling our sometimes “wicked” problems.

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