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Design Thinking in First-Year Composition: Writing Social Innovation into Service-Learning Pedagogy

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Abstract

As a field, writing studies has been an astute proponent for service-learning and social justice advocacy. From writing in the classroom to writing in the world, scholars and teachers have continued to expand the scope of “writing” as a way to address pressing social issues and create better advancement opportunities for individuals in our global community. Much of these efforts have resulted in service-learning courses designed to broaden students’ agency and access to community issues. But as social problems continue to emerge and evolve, so must our methods to service-learning pedagogy and social justice practices. We need to design socially responsive courses and devise effective ways to deliver them. Given the growing prominence of design thinking in higher education, many fields in social science and humanities may benefit from a design-driven framework for facilitating service-learning pedagogy and social justice practice. In this essay, I present a pedagogy case where service-learning meets design thinking. Through critical reflections by students, the community partner, and the instructor, I demonstrate how an integration of design thinking with first-year composition can inspire social innovation and activate social change.

Keywords:

Design thinking, service-learning, design challenge, social justice, social innovation

Introduction

Our expert knowledge, reflected in threshold concepts or keywords, helps us understand and convey how writing is never just writing. They help us say things like this: writing is social and rhetorical. Qualities of good writing are shaped by people, with purposes, in specific places. (Adler-Kassner, 2017, p. 332)

In her Chair’s Address at the 2017 Conference on College Composition and Communication (CCCC), Linda Adler-Kassner urged rhetoric and writing studies scholars to embrace a broader definition of “writing” to include advocacy and social justice labor. Our scholarship and pedagogy, as Adler-Kassner (1995, 2017; Adler-Kassner et al., 1997) and many others have contended, should serve *beyond* helping students acquire technical skills. As students practice and develop their writing, we must also harness the opportunity we have with them in the classroom to cultivate an awareness of social problems and grow students’ motivation to address these problems as engaged citizens of their communities. Certainly, such pedagogical labor isn’t easy work. Writing instructors face institutional and structural challenges to enabling social justice pedagogy. Carrie Leverenz (2014) called these challenges “wicked problems,” a term frequently used in design-thinking literature to represent the lack of singular, definitive solutions to complex problems.

As social problems continually emerge and evolve, so must our pedagogical methods, particularly in service-learning projects and social justice practices in order to design socially responsive courses and to measure their impact. Kathleen Kelly Janus (2015) reported that “the strong interest among the college-aged in doing social good has led to an explosion of social entrepreneurship university programs around the world” (“Bringing

The Remix Pairing *continued*

Social Entrepreneurship”). While writing studies may not be focusing its pedagogy on entrepreneurship *per se*, it certainly strives to prepare students for a world of changemaking. Within the social science tradition, changemaking is a pedagogical paradigm that aims to affect “transformative agency among historically marginalized individuals and communities toward specific and consequential ends” (Bang & Vossoughi, 2016, p. 173). Social innovation helps accomplish this mission by providing creative and radical mindsets for developing innovative solutions (Mulgan, 2006; Taylor, 1970). Together, they afford us the methodology to teach our students to be ethical leaders with strong rhetorical awareness and proficiency in affecting positive change in society.

To keep pace with global and local social conditions, our pedagogy must reflect flexibility to a degree in which institutional and structural challenges can be overcome. For this purpose, we may turn to design thinking to devise a design-driven framework for facilitating socially relevant pedagogy and practice. Given its grounding in democratic and iterative innovation, design thinking can be a viable methodology for creating activism learning activities from within the writing classroom. This essay aims to provide a precedent by sharing a story of design thinking deployment in a first-year composition setting.

Literature Review

Service-as-Learning and Social Justice

Social justice is a way to increase students’ abilities to articulate their experiences, critique their world, and address those identified issues with subsequent action. (Chapman et al., 2011, pp. 539-540)

Entering the 21st century, writing studies has experienced a notable “public turn” (Mathieu, 2005) where theorists and instructors were most enthusiastic about advocating for community based pedagogy. Scholars like Anne R. Gere and Jennifer Sinor (1997), Thomas Deans (2000), Thomas Tai-Seale (2001), Ellen Cushman (2002), and more recently Ashley Holmes (2016) have championed service-learning as socially responsible and community involved pedagogy in the writing classroom. While service-learning remains a current trend in our field, Adam Webb (2013) argued

there needs to be more integrated models for teachers to create service-learning projects and collaboration with communities. Students should not be merely volunteering for the community (e.g., painting shelters, visiting senior homes). Rather, service-learning should be an experience that facilitates students’ critical thinking about the community they serve, while at the same time, educating community partners about the pressing social issues at hand.

The first step toward such integration is understanding what service-learning means to writing instructors and the community at large. In the introduction to her anthology, Susan Garza (2013) argued that service-learning in the writing classroom should not be “a means to an end, but rather an environment in which working with community partners on real documents allows students to see that learning occurs because of the service” (p. 4).

In *Writing Partnerships: Service-Learning in Composition*, Deans (2000) pointed out a critical goal for service-learning pedagogy: it must center “on a dialectic between community outreach and academic inquiry” (p. 2) so service-learning courses must balance the goals of the course as well as those of the community. Melody Bowdon and Blake Scott (2003, pp. 5-6) provided a useful set of guidelines for setting up service-learning courses, i.e., projects should:

- relate directly to course goals,
- address a need in the community,
- involve developing reciprocal relationships between the college/university and the communities in which it is embedded, and
- involve critical reflection on the student’s part.

As I have alluded to earlier, we are continually faced with evolving challenges in service-learning pedagogy and social justice advocacy. Changing social problems require innovative approaches and scholarship from design driven problem-solving practices has shown great promise in creating sustainable pedagogical frameworks. Next, I provide an introduction to design thinking and its associated literature pertaining to the disciplinary

The Remix Pairing *continued*

focus of writing studies. Coupled with the exigency for service-learning in writing pedagogy, I demonstrate how design thinking works to create actionable social justice efforts from within our classrooms.

Actionable Social Justice: Introducing Design Thinking to Service-Learning

Design thinking is a human-centered problem-solving philosophy and methodology that aims to pursue solutions or strategies to address complex social problems through an iterative design process. Design thinking scholars typically look to four landmark texts that laid out that basic concepts of design thinking: Bryan Lawson's *How Designers Think* (1980), Robert McKim's *Experiences in Visual Thinking* (1980), Peter Rowe's *Design Thinking* (1987), and Richard Buchanan's "Wicked Problems in Design Thinking" (1992).

Many writing scholars have explored the uses of design thinking over the years. They began as early as 1989 with Charles Kostelnick's "Process Paradigm in Design and Composition: Affinities and Directions," where he critiqued the then buzzword, "process pedagogy," and offered design as a counterpart to the writing process. Twenty years later, Richard Marback (2009) offered design thinking as a "new" paradigm for composition. Since Marback's (2009) influential discussion of the "design turn" in composition studies, many scholars have taken up design not just as aesthetics but as a rhetorical lens for framing and addressing complex problems we and our students face in personal, social, and professional lives. Design is both process and product and can thus be aligned with writing. James Purdy (2014) argued that "design thinking offers a useful approach for tackling 'wicked' multimodal/multimedia composing tasks" (p. 614). Purdy contended that design thinking forces writing studies to move beyond print based conditions and explore other modalities as available means of meaning making. Leverenz (2014) also advocated for design thinking as a teaching framework and composing process for multimodal texts: "... it eliminates the question of how to fit multimodal composing into writing classes since it focuses on designing solutions to problems rather than creating forms for their own sake" (p. 3).

Most recently, across rhetoric/composition and professional/technical communication studies, scholars

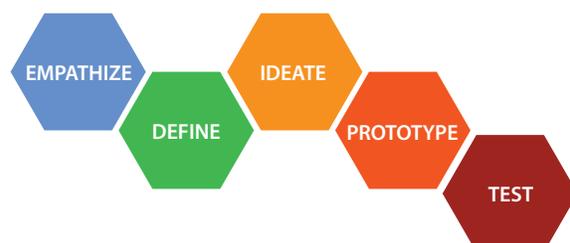
have advocated for design thinking as pedagogically sound approaches for problem-based learning (Bay et al., 2018; Pope-Ruark et al., 2019) and cultivating a creative habit of mind (Wible, 2020). Design thinking can "prompt students to dive more deeply into the cultural community they are working with," as Scott Wible (2020) observed from teaching via this method.

Nevertheless, design thinking is more than just *thinking*. With the intention of giving its practitioners real-life problems to solve, design thinking is celebrated as an actionable, transformative learning approach to help students commit to creative problem-solving (Sheridan, 2010). Rebecca Pope-Ruark and colleagues (2017) broadly defined design thinking as "the human-centered, empathy-driven process of imagining, creating, testing, and revising responses to critical, highly contextual, dynamic, and messy problems" (p. 520). Design thinking is typically represented in a 5-step model (see Figure 1) as follows:

1. Empathize – with your users (constituents, audience)
2. Define – your users' needs, their problems, and your insights
3. Ideate – by challenging assumptions and creating ideas for innovative solutions
4. Prototype – to start creating solutions
5. Test – solutions

Figure 1

Five Components of Design Thinking According to the Stanford d.School (2017)



Design thinking lets students lead the change-making process by taking social justice matters in their own hands, defining and ideating actionable solutions, and developing those solutions for actual implementation. In

The Remix Pairing *continued*

the next section, I present a first-year composition course designed to achieve the aforementioned goals of social justice pedagogy through design thinking. I encourage readers from disciplines outside of writing studies to read with the intention of learning how the application of design thinking to a service-learning course might be applied to their own disciplines, including anthropology, sociology and political science, social work, and public policy, to name a few.

Course Specifics

The course discussed in this article was WRIT 1301 – University Writing for International and Multilingual Students (INTL). The study was conducted with 11 students who enrolled in a summer INTL section of WRIT 1301 between June and August 2018. Eight of these students were from Oman and three from China.

Following Bowden and Scott's (2003) direction, this course was designed to link the goals of service-learning described in the previous section with the needs of our community partner, Minnehaha Food Shelf (<http://www.minnehaha.org/foodshelf.html>). The Minnehaha Food Shelf is a joint initiative by three local churches in south Minneapolis, Minnesota, that provides food for more than 600 people in need who live in the Minnehaha neighborhood. The readings, activities, and assignments that students encounter center on social justice, social change, and social issues specific to the food shelf.

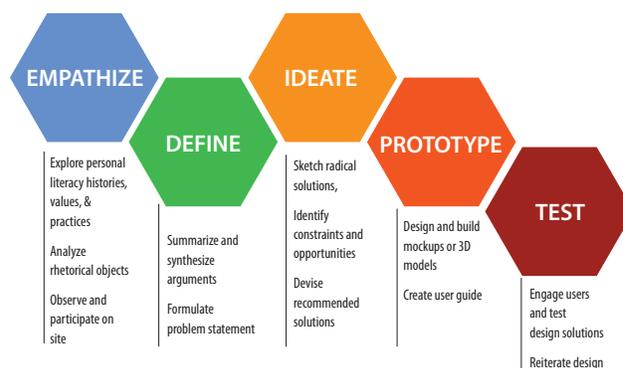
Within the 8-week summer course, students were immersed in an intensive rhetorical experience where conversations about academic writing, social and professional compositional conventions, and social justice concerns were infused into the weekly class meetings:

- Week 1 - Introduction to literacies and social action
- Week 2 - Discourse activities
- Week 3 - Rhetorical situation
- Week 4 - Design thinking orientation
- Week 5 - Design thinking sprint
- Week 6 - Digging deeper into social justice and social issues
- Week 7 - Implementation strategies
- Week 8 - Team presentations

The assignment sequence for the course was intentionally designed to mirror the design thinking process. The first three assignments aimed to cultivate empathy and develop students' analytical thinking with rhetorical awareness. The last two assignments, one individual and one team based, focused on enabling students to address the design issues facing our community partner. Figure 2 shows how the assignments in this course are mapped onto the design thinking process.

Figure 2

The Assignment Sequence Mapped onto the Design Thinking Process



Students were first invited to reflect on their personal literacy histories, values, and practices to explore the influence of cultural traditions and personal experiences in their own literacy development. This exercise was set in place before the introduction to design thinking as a way to promote self-evaluation and to cultivate empathy toward others. Then, students practiced listening to others and reporting on others' perspective. The second assignment was a summary essay where students picked two assigned readings and capture the essential arguments in those readings by quoting, paraphrasing, or synthesizing key points.

Next, students were given an overview in rhetorical theories and approaches; the associated exercises included an in-class collective analysis of pop culture references. For their third assignment, students were asked to individually select an artifact of literacy or social

The Remix Pairing *continued*

identity to pick apart rhetorically. Through the lens of the rhetorical situation and rhetorical appeals, students developed their ability to critique the design of everyday literacy and social identity products—ranging from books, computers, and smartphones, to schools, libraries, coffee shops, workplaces, and religious institutions. The primary learning objective of this assignment was to develop critical-rhetorical thinking skills in the students.

The personal literacy narrative, summary essay, and rhetorical analysis assignments were introspective in nature. Students looked into their own experiences; chose materials that resonated most with their own beliefs, thinking, or aspirations; and analyzed objects they felt most attached to. The next set of assignments were more empirical in comparison.

The fourth assignment required students to observe and report on their study of the Minnehaha Food Shelf based on their engagement with the community partner volunteers and a one-day site visitation and volunteering experience. Students developed potential research questions and documented their encounters with our community partner and the actual service-learning experience in the form of an ethnographic report.

Based on their ethnographic experience, students were formed in teams of two to three members to fully engage the design thinking cycle. As they have already begun to empathize with complex social issues, students were asked to produce a design challenge report that specifies a definition of the particular food shelf related issue their team chose to address, their ideation of a viable solution, and a prototype of the model solution. Then, in the second part of the report, students were tasked with testing their prototype and presenting a final version of their recommended solution to the class at the end of the semester.

To give readers a sense of the student projects and their process, I feature here a sample prototype which students have granted permission to share. Figure 3 shows a prototype of an interactive food shelf supply poster. The student team that produced this poster examined the existing outreach effort of the food shelf and recommended expanding the scope of the food shelf's promotion and advertising. After visiting the food shelf and observing its client population, this student

team noticed that most clients seemed to come from a particular neighborhood and very few from other areas that were supposedly covered by the food shelf service. This student team spoke with the food shelf director, understood the challenges of reaching population in those secluded areas, and devised an outreach plan that aimed to increase the awareness of the food shelf in those areas. The students determined that while getting more exposure is morally good for the food shelf, the increased traffic must not become a burden to its current operations. The team prototyped and tested a new communication material; that is, the interactive poster shown in Figure 3. The students designed the poster to be more than just a visual attraction, but also functional as it would be posted in schools, markets, and other populated public spaces where individuals, parents, and even children can indicate their needs or make advanced reservations. According to the student team, this poster design underwent several iterations throughout the design challenge as they listened to the feedback provided by their peers during the testing phase.

Figure 3

A Prototype of an Interactive Food Shelf Supply Poster



The Remix Pairing *continued*

Other student projects included 3D models of redesigned floor plans for the food shelf site to optimize volunteer workflow (three student teams did this direction) and digital wireframes of computer-assisted client registration program to update the intake protocol at the food shelf (two teams pursued this direction).

Methods

To capture the value of design thinking in the course, I employed critical reflection as a qualitative method to gather relevant data. Jennifer Ahern-Dodson (2013) argued that critical reflection at the student, faculty, and community levels enhances service-learning pedagogy. In fact, critical reflections provide crucial insights to the teaching and learning process. Before the course concluded, students were asked to compose their reflection on the semester with special attention to the design challenge project:

- What was your overall experience with this course?
- What was your overall experience with the design challenge component?
- What was your overall experience collaborating with your design team member(s)?
- Describe your design thinking process in approaching the design challenge. What worked and what didn't?
- What was the most important thing you learned from the design challenge experience?
- What was the most challenging part of the design challenge project or experience?
- What was your experience and/or perception toward social justice before encountering the design challenge project? What is like after?
- What would you like to say to George, Judy, and/or the volunteers at Minnehaha Food Shelf?

I have also invited representatives from the food shelf to reflect on their experience collaborating with our students:

- What was your overall experience with this service-learning collaboration?
- What do you think worked well and what didn't?

- What advice would you give to students regarding volunteerism?

Lastly, I provided a critical reflection from my own position as the facilitator of this service-learning project. I focused on the following questions:

- What were the evidence of success in the service-learning collaboration with the community partner?
- What were the evidence of success in the students' engagement with the design thinking and/or design challenge project?
- What challenges did the community partner face in our collaboration?
- What challenges did the students face in the design challenge project?
- How did design thinking manifest in the course, overall?
- If I were to repeat this course with similar learning outcomes, what will I do differently?

To analyze the student reflections, I employed a constructivist thematic analysis method (Braun & Clarke, 2006), looking for articulations of experience that critique the value or benefits, constraints, and future iterations of design thinking and/or design challenge projects in the service-learning course. The goal is not to be reductionist or essentialist but rather to use the discourse provided by students—which constitute multiple subjectivities—to make sense of their experience in the context of this course.

Results

Student Reflections

Overall, students responded positively to the outcome and their experience in the design challenge project. All of the students reported they benefited from the food shelf visitation and volunteering experience. They included narratives of engaged learning that reflect benefits of a service-learning approach to writing instruction and highlight the value of design thinking. Students have also expressed appreciation for a hands-on, community-based project rather than a "typical writing assignment" that students perceived to be unrealistic and impractical.

The Remix Pairing *continued*

In the student reflections, I have unraveled instances of emergent learning that demonstrate how design thinking augments service-learning in first-year composition.

In my analysis of the reflections, four major themes emerged. First, students noted that the collaborative nature of the design challenge project has helped them learn to see a problem from multiple perspectives. Students reported how working in teams helped them to not just see a problem from their personal interest points but also consider other probable issues. More importantly, students realized that their goals in the design challenge project are not just about solving the problem at hand, but to consider the human factors surrounding complex social concerns that would not be possibly solvable overnight. Students stated that by collaborating with others, they arrived at solutions that were user-centered and multifaceted.

Second, students expressed early experiences of frustration when they were attempting to understand the design problem and explore viable solutions. Most of the student teams struggled to arrive at a working problem statement for their design challenge project when they were expected to present a narrowed research direction. However, they embraced the ambiguity of the design thinking workflow and upheld their confidence for a working solution. Students noted how design thinking lets failure be an expected part of the problem-solving process, and created space for failures. A student team in particular was relentless in using computational methods for addressing the food distribution method in the food shelf. They did not give up when the first solution they proposed did not work out. Nevertheless, after devoting more time and trials, their solution was among the best recommendation in the final pitch.

Third, most students included reflections of their critical thinking and engagement with social issues that are pressing in our current socio-political climate. Although all of the students in this course were international students, their reflections indicate deep engagement with social problems that have been ingrained in the U.S. culture. Since the design challenge project was set against the backdrop of food insecurity and poverty, many students reflected on the exposure they gained from dealing firsthand with those who were not from a privileged position, and the project

has provided students with the real-world encounter of hunger and financial difficulty. During the food shelf visitation, students worked with other volunteers to serve clients and helped them with their specific needs.

Lastly, given that none of the students had prior experience with a food shelf, most students thought this project gave them an experience that was charitable. For many of them, this volunteering experience was the first of its kind, and it has given the students exposure to the ongoing struggles experienced by the food shelf. Not only were they able to see how a food shelf operates, students got to learn about the ins and outs of food shelf politics (since food shelves are mostly grassroots initiatives and non-government sponsored, and are operated based on community goodwill). In the student reflections, I have documented recurring notes of appreciation for being able to experience “real-world” social justice issues.

Community Partner Reflections

To gauge the experience of the community partner in this project, I have invited two representatives to provide critical reflections on their engagement with this service-learning initiative. The food shelf director, George, politely declined to provide any feedback. Judy, who was my first point of contact in this service-learning collaboration, provided a brief reflection. First and foremost, she differentiated her way of engaging with the students from George’s:

First of all, it was a pleasure meeting all of the students. I enjoyed telling them about the Minnehaha Food Shelf and listening to their immediate responses. The students had an opportunity to get two perspectives about food shelves by listening to George and me. His is managerial; mine, more philosophical.

As a volunteer at Minnehaha Food Shelf, Judy was emotionally invested in the students’ experience with their service-learning project. Judy, who was a school teacher, felt she needed to engage students on a “more philosophical” level by inviting them to think about the politics, values, and social tensions around serving less-fortunate community members. She thought George’s approach was “managerial” in the sense that he was more concerned about the operational and technical aspects of

The Remix Pairing *continued*

running a food shelf. While students can certainly learn a lot about the technicalities of a food shelf's operation, Judy felt that a service-learning experience should provide students with an acute exposure to the emotional and mental, not just physical, labor of volunteer work.

Judy was cognizant of the limited interaction students had with the volunteers and clients at the food shelf. She would have loved to have the students spend more time with the food shelf volunteers, or even with just her and George, after the students' volunteering:

In reflecting, I wish that after the group had been to the food shelf, they would have had time to ask questions and/or comments on what insights they had, if any. This could be of benefit to us. Everyone has something to learn from others.

Both Judy and George did not make it to the final presentations that students gave at the end of the semester. However, these presentations were video-taped and shared with Judy and George after the semester. Indeed, it would have been a more integrated experience if the students could present directly to the food shelf personnel, be they George and Judy, or other volunteers, and receive direct feedback on their proposed solutions. In terms of future iterations of such service-learning course design and collaboration, Judy has suggested an extended "hands-on" volunteering experience—e.g., letting students take charge of the client registration process, collecting food donations, negotiating with policymakers in the area—which, in Judy's terms, will "open eyes not only how food shelves operate but also the ways in which clients benefit—and it's not just foods and other products."

In summary, representing the Minnehaha Food Shelf as the community partner in this service-learning project collaboration, Judy has focused her reflections on the pedagogical importance of a service-learning project. In her response, Judy has emphasized the need to focus on the "philosophical" learning through volunteerism. She has also highlighted the importance of creating a channel for continued collaboration or conversations between students and the community partner as true learning shouldn't be bound by the logistics of a course.

Instructor's Reflection and Observation

To triangulate the student and community partner experience, I turned to my own critical reflection on this project. First, I acknowledged that any course design is in itself a craft and can be laborious. Creating a course with new emphasis, devising a new assignment sequence, and setting up the logistics for community partnership were time consuming yet rewarding to the teaching and learning experience. Prior to choosing the Minnehaha Food Shelf as the community partner in this course, I reviewed numerous nonprofit organizations for potential partnership. However, given the short turnaround time to meet with these organizations and discuss partnership strategy, I have decided to leverage my personal connection to the Minnehaha Food Shelf and reached out to its coordinators a few weeks before the start of the course. Fortunately, the coordinators were receptive to the partnership proposal, and agreed to their recommended role in the course. In order to prepare myself for facilitating this service-learning course, I visited Minnehaha Food Shelf prior to the semester to get familiarized with its setup and operation.

Overall, I considered the collaboration with Minnehaha Food Shelf a success in terms of accomplishing the pre-determining learning contract that is to give students a volunteering experience, to let them experience the "real-world" of food insecurity and hunger issues in our local community, and to give them a chance to interact with volunteers who believe in the mission of the nonprofit initiative. George, the manager of Minnehaha Food Shelf, mentioned in the pre-visitation roundtable meeting with the students that the ultimate goal of his in this collaboration is to "plant a seed" of curiosity and kindness in the students. Given that all of the students in this course had never heard of a food shelf nor interacted with someone who contributes to it, this was a valuable opportunity to expose them to such movement and get them interested in community-organized initiative.

Before my students completed their mandatory course evaluation at the end of the semester, I took the opportunity to engage them in a conversation about the goals of the service-learning course design and their involvement with our community partner. This led to an hour-long serendipitous conversation about the projects in this course and how they were interconnected and

The Remix Pairing *continued*

student-centered. Students reported that they appreciate how this course took them out of the classroom and positioned them as changemakers in the community. Most students, unsurprisingly, did not see themselves as influential leaders in affecting positive change in their immediate community. However, after experiencing this course, students reported that they felt more confident in vocalizing their beliefs for better policies serving marginalized and underrepresented communities. This to me is an evidence of success in the design thinking integration; students enter serious conversations about policymaking and influencing change from empathy. They are able to demonstrate how design—including policies making, community organizing, and volunteerism—should be not only be human-centered but advocating for those who are powerless or less capable to voice their opinions.

Certainly, this project was not without any shortcomings. Given the nature of the summer course and less time for students to truly invest in changemaking, students have reported that they felt rushed and wished to have more intense engagement with the community partner. Most students thought the one-time volunteering experience wasn't sufficient. For our community partner, it was important students did not participate in the volunteering just for the grades in the summer course. George and Judy had really wanted students to see how social discrimination against less represented communities harms certain members of the society. It was heartwarming, however, to find that most students plan to visit Minnehaha Food Shelf on their own after the summer semester because they want to learn more about the community service work and how they can contribute as a member of the neighborhood (students have stated this in their course evaluation feedback).

Design thinking fit naturally with the pedagogical goals and assignment sequence of this course. The way design thinking begins with empathy and ends with iterative revision based on actual user feedback aligns with the way I have been teaching writing. Design thinking let me devote more time in idea generation when I realized that students wanted more time to think about their proposed solution. Design thinking pushed students to make their ideas a tangible reality. It allotted

space for students to bring their ideas to life. Instead of just thinking about a solution, they created it.

Discussion

This study situated design thinking as a viable pedagogical design framework that leverages the ambiguous and iterative nature of design in a service-learning model. It let students experience social concerns firsthand and embrace failures as opportunities for iteration. Design thinking augments service-learning projects and course design by structuring service-learning experience around actions students can take that lead to innovative solutions for the community partner. Learning is thus proactive and focused on desired outcomes for students and community stakeholders. Whether it is a simple redesign of visual materials or more complex reorganization of existing processes, design thinking gives students a structure to follow; its ambiguity, however, still allows for creative thinking. In fact, one of the key characteristics of design thinking is to start with radical imagination, followed by careful deliberations for viable options based on existing factors, affordances, and constraints. This gives students opportunities to practice their developing expertise in research—problem formulation, data collection, data analysis, and report of findings. In a first-year composition classroom, design thinking makes writing a key part of the problem-solving process rather than just an artificial exercise that is forced upon the students as a course requirement.

Based on the lessons learned through this study and from existing literature, I present a framework for developing service-learning courses that are powered by design thinking. Table 1 shows the guiding principles for such pedagogical design, strategies for achieving those principles, sample assignments or projects, and heuristics for evaluating student learning.

A design driven service-learning course should begin with empathy. Students should examine their own experience and recognize how personal histories, values, and practices can be influential to their ways of looking at community problems. Once they have completed an introspective review of their own identities, students should interact with community partners to gauge initial understanding of existing problems, hopes, ongoing

The Remix Pairing *continued*

Table 1

A Design Driven Service-Learning Pedagogical Framework

Guiding principles	Strategies for achievement	Possible activities or projects	Heuristics for evaluation
Empathize with actual users/stakeholders in realistic, community problems.	Use introspection to examine the role of personal experience in affecting future actions. Interact with real users/stakeholders to understand the community problem.	Reflect on personal experience. Collect individual or collective narratives from users/stakeholders in the community.	Demonstrate understanding of the human condition. Provide insights into unique social environment(s). <i>Do students understand the community problem at a personal level?</i>
Define problem areas in terms of human factors in relation to community conditions.	Create focused problem statements to guide design process.	Compose technical/topical definitions. Share draft definitions with community partners and revise definitions based on participatory feedback.	Facilitate comprehension of complex issue(s). Is there a concrete description that can be understood by experts and non-experts?
Ideate radical solutions and consider affordances and constraints of community factors.	Brainstorm ideas individually and collectively. Suspend evaluation or judgment. Let ideas grow	Invite community members to share their vision/dreams. Sketch variations of ideas and solutions. Create a pros/cons comparison of considerations.	Give design options. Propose viable direction(s). Show design process. <i>Does the designed solution respond to the community problem at hand?</i>
Prototype potential models for specific community.	Use multiple modalities to create actual models.	Use prototyping or digital fabrication technologies to create mock-ups.	Build tangible solution(s). Present testable solution(s) with direction for use. <i>Does the proposed solution look/feel tangible and is it testable?</i>
Test prototypes with actual community users.	Gather potential users and engage them with the model, preferably in real community settings. Collect feedback.	Conduct usability tests and user experience research.	Deliver results of user/usability testing. Indicate next steps in iterative design. <i>Does the proposed solution work? What is the next iterative design?</i>

The Remix Pairing *continued*

tensions, etc. These insights are going to be extremely useful when students enter the next phase that is the define stage.

By working in teams, students would next compose clear definitions of the community problems based on their interaction with the community partners. These definitions should include technical as well as social issues that would inform the design direction for addressing the specific problem each student team choose to focus on. Community partners should be given the opportunity to review these definitions and provide feedback. Such an exercise allows students to practice communicating/writing to insider and outsider audiences.

Using their finalized definition, student teams can begin ideating possible directions for a designed solution that addresses, but does not necessarily solve, the community problem. Students should be encouraged to begin with radical ideas. Begin with the unrealistic, impossible solutions. Then, ask students to identify what makes these radical solutions unachievable, and look for alternatives. This exercise helps students avoid sticking to ordinary solutions or those that are immediately within reach. Students should also document their design process to not only show their rhetorical thinking, but for reference when they need to go back to revise an idea. Once the team feels confident about their draft solution, students should use various means of fabricating and prototyping to build a mock model of their design. The purpose of this step is to allow students to evaluate and test their design. Students will learn the costs, affordances, limitations, and appeals of materials. Instructors can take this opportunity to discuss the rhetoric of technology and technological cultures as a way of helping students understand their impact on the community.

The last step of design thinking in this model is testing. Students work to put their prototyped model to test, preferably testing with actual community members who would be most impacted by the recommended solution. After careful engagement with users and collecting their feedback on the prototype, students may return to the design board to consider iterative changes to enhance their designed solution. This lets students turn the less functional or less effective parts of their proposed

solution into a better design. It also teaches students that designing social innovation, just like writing, is never complete.

A design driven service-learning approach emphasizes the *design* process. However, it doesn't just end with testing the model students recommend as their final product. The instructor can help students go the extra mile by actually implementing the recommended design in actual community settings. Instructors can work with students to gain community partners' buy-in for onsite testing, gather real user data and feedback, and evaluate the outcome. This would truly take students out of the classroom and into the "real world" where social problems are more difficult to disentangle from political, environmental, technological, and other aspects of our everyday life. This lets students practice applying the concepts and skills they are developing from the classroom into solving problems that matter to the community.

Conclusion

This study shares a story of design-thinking integration with a service-learning course crafted to empower students in devising actional social innovation that would affect positive change. In a summer first-year composition course designated for students from international/multilingual backgrounds, I have facilitated a design challenge where students collaborated with a local community partner—Minnehaha Food Shelf—to identify and define existing "wicked" problems, and ideate, prototype, and test user-centered solutions. In the process, students have learned more than different genres of writing, but their role as changemakers through social innovation. Through critical reflections by students, the community partner, and myself as an instructor, I have documented key themes that speak to the viability of design thinking as an effective model for service-learning design and social justice advocacy. I have also provided an initial framework for designing future service-learning courses through design thinking principles. Service-learning provides a meaningful way to promote students' agency and access to community issue; an integration with design thinking in first-year composition can further inspire social innovation and activate social change.

The Remix Pairing *continued*

For teachers and scholars in the broader fields of social science and humanities, this study shows that design thinking offers a specific mindset for problem solving and community-based learning. By seeing and understanding social issues through an empathetic lens and designing and developing tangible solutions, students develop better confidence in affecting positive change. If instructors are interested in helping students achieve these skills, I strongly recommend giving the design thinking approach a try.

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The Remix Pairing *continued*

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The Remix Pairing *continued*

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