Coding with Flavor: Combining Foodways Research and Inclusive Design to Teach Empathy in a Digital Composing Course

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Combining food pedagogies, which examine how power, authority, and expertise are intertwined with gender, race, politics, and class (Alvarez, 2017; Flowers & Swan, 2018; Julier, 2019; Zeide, 2023), this article explores using empathy to teach students how to create accessible, digital foodways research projects and explicates how students reacted to a pedagogical approach that encouraged guided self-teaching (Lawrence, 2022) and asked them to "reimagine what it means to program and write code" (Quigley, 2022). Students took an inclusive design approach (Horton & Quesenbery, 2013) and applied design thinking (Tham, 2021) to use GitHub Codespaces to learn basic HTML, build websites, and create food texts as they considered what it means to write in a digital environment.

Welcome to ENG 388: Writing for the Web!

What's your favorite food? Where does it originate? What is the most popular food on campus? In Illinois? These are the questions I asked Western Illinois University (WIU) students in the syllabus for ENG 388: Writing for the Web. The syllabus informed students that we'd explore these questions, among others, while learning basic HTML to build websites and create food-themed digital texts.[1] The focus on food pedagogically sought to provide a way to learn, as Rick Flowers and Elaine Swan (2015) said, "about the Other, about our selves [sic], our food producers, and the animals and plants which are our food" (p. 19). Although the course's learning outcomes prioritize creating digital content—from social media posts to a small, multipage website—the projects were grounded in food research because it is an entry point into seeing food as a memory object used to represent people across places and time.

By studying foodways, we moved beyond our institution to critically examine how food defines local and global communities. WIU is a medium-sized

1 The course materials (syllabus, assignment sheets, and student examples) are accessible via GitHub (https://github.com/am-beardsley/eng-388). You can view and download materials there or access the live website to see course content and student projects.

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public university in the small Midwest city of Macomb, Illinois, and Writing for the Web is a course in our Professional Writing (PW) option. Students majoring or minoring in professional writing can choose to take it to fulfill their PW requirements. In Fall 2023, Writing for the Web was the only PW course option beyond Technical Communication, a required course for PW folks. I've provided some context about the program here to give a bit of background about the 10 students who took the course. In addition to being English majors, none of the students had any prior coding knowledge, and only four took Technical Communication with me.

This article gives you a taste of how foodways informed Writing for the Web. I discuss what I learned using Stephen Quigley's (2022) Open Fuego tool and open-source coding platforms in this 300-level professional writing course. First, I go over how I used foodways to frame the course and highlight the research questions and the semester's central project goal. Next, I overview the assignment sequence and how I incorporated design thinking. Then, I describe GitHub Codespaces, the open-source code editor we used, and share our experience using Codespaces as the primary course tool. I conclude with a brief reflection on what I plan to change the next time I teach students HTML and CSS. In doing so, I hope to encourage readers to take on foodways research in digital writing courses and use open-source tools to teach coding.

Course Topic: Foodways Research

During the first week of classes, I introduced food studies and foodways research as the course focus. According to Alice Julier (2019), food studies is "the academic practice and teaching about food, agriculture, food systems, and food culture" (p. 21). I explained that the digital content we'd create falls under food studies and that we'd examine foodways—food's cultural, social, and political components. Although students were unaware they'd have to write about food when they registered for the course, grounding our projects in foodways research took some pressure off topic selection so students could focus on building technical skills. Everyone has something they can say about food. In this way, a foodways approach facilitates a sense of expertise for writers. They start by researching something they know about food and become experts in the ways that topic impacts culture. As you'll see in the next section on assignments, leaning into food expertise meant that students wrote the content for their websites first, so the whole third unit focused on revising their writing and coding websites.

When choosing topics, I directed students to consider the implications connected to a food or food-adjacent topic and critically examine what Peter

Naccarato and Kathleen Lebesco (2012) define as culinary capital, which is the status and power conveyed through food and practices such as cooking, eating, and buying ingredients (p. 3). There were four central research questions based on Julier's work that students set out to explore in their projects:

- How is food "part of a larger system"?
- "In what ways is that system shaped by conflicting or consensual economic, social, material, and cultural goals?"
- Who benefits from the system?
- And "How is power—and inequality generally—inscribed in these skills, practices, ways of organizing sustenance and social life?" (p. 23)

Through spending the semester conducting foodways research, our goal was to examine food and power and use food to tell stories. Foodways, according to Stephen Alvarez (2017), take culinary practices (e.g., how we cook) and the foods we eat "as social research that intersects with public advocacy" (p. 151). We began with our eating habits to learn more about food's social, cultural, and political ingredients to write content that would teach visitors of our websites about a food-related belief or practice. While reading Anna Zeide's (2023) *US History in 15 Foods*, students began working with food as a cultural tool by researching where their favorite food comes from. They found what Carrie Helms Tippen (2018) refers to as recipe origin narratives, stories about where foods originated and by whom—what restaurant, group, or individual (p. 11). They searched for the food's origin (country, state, and city), investigated when the food was invented and what was happening around the world to begin crafting context, considered who was credited with inventing or popularizing the food, and found several recipes online to explore ingredients and modifications. Their initial foray into researching their favorite food prompted them to critically examine food stories and laid the foundation to move into the course's three major projects: creating accessible content for Instagram, writing short and long-form blog posts, and coding a website to feature their writing.

Applying Foodways and Design Thinking to Build Assignments

Writing for the Web consisted of three projects, which made up our semester-long study to examine food's connections to social life, culture, politics, and power and how food constructs gender, race, ethnicity, and location as it converges to create identities. In this section, I provide a brief overview of each major assignment and how they apply design thinking—primarily empathize, prototype, and test—to students' writing and web design.

As I planned the course, I used design thinking to determine how to scaffold assignments that built into students' final hand-coded websites. According to Jason Tham (2021), "Design thinking is a combination of a methodology and mindset for innovative problem solving" that takes a recursive approach (p. 8). By incorporating empathizing with the ways users engage content, prototyping initial designs by having informal discussions about works-in-progress, and testing websites throughout the building process, students embraced recursivity to implement feedback into writing content for and designing their final websites.

Although design thinking played a role in my overall course design to implement opportunities for students to problem-solve and collaborate (Tham, 2021, p. 18), I opted not to use the term. Even though most students take Technical Communication before Writing for the Web, the course content varies depending on the instructor. When I teach Technical Communication, students learn about design thinking and user-centered design; however, six of the ten students took Technical Communication before I started at Western, so they didn't have the same pre-existing knowledge as some of their peers. To account for this, I tried to keep jargon to a minimum and focused on teaching inclusive design strategies by implementing design thinking's phases (empathize, define, ideate, prototype, and test) into our project scaffolding.

Across our projects, empathy was a key ingredient. Each project asked students to consider what users need to engage their content. Project 1: Storytelling on Social Media tasked students with exploring project ideas by creating Instagram posts to introduce them to accessibility practices like writing alt text. Instead of writing a formal topic proposal, students pitched their semester-long research project by optimizing their Instagram profile (Figure 3.1). Students' profile pictures reflected their topic, and bios included their food-related interests, a link to their favorite local restaurant or café or food content, a call to action with a link to a food-related initiative, and the class hashtag (#ENG388) to ensure we could find each other's work.

Figure 3.1. The Instagram bio for Writing for the Web student Jamariah. They signal their topic choice (barbecue food) and indicate their project might make connections between barbecue and Chicago foodways.

Although simple additions to an Instagram profile, such optimizations required students to consider their audience from the beginning by asking, "What does my profile communicate to users, and how does it reinforce the political, cultural, and social elements of my foodways research project?"

With empathy in mind, the central purposes behind Project 1 were to learn about creating accessible digital content (specifically, writing alt text and visual hierarchy) and practicing design thinking by employing ideation to explore foodways topics before finalizing their research focus, prototyping their ideas by making Instagram post mock-ups, testing their prototypes by workshopping posts with their peers, and making necessary revisions based on how their users, in this case, their workshop partners, interacted with their content before posting. Applying design thinking, we discussed and implemented a recursive process relying on self-teaching. Using Dan Lawrence's (2022) *Digital Writing: A Guide to Writing for Social Media and the Web*, we emphasized that self-teaching is "the most important skill for any professional" and that they'd need to be patient and resourceful later in the semester when we dove into HTML and CSS (pp. 42–43). Additionally, I wanted to emphasize that we would, especially when it came time to code a website, experience failure. I was reminded that design thinking is "about going back and learning and thinking, a recognition of failure and revision as a natural and expected part of creation" (Purdy qtd. in Pope-Ruark, 2019, p. 441). With empathy and recursivity in mind, our image-driven content focused on accessibility using Disability:IN's (2022) accessible social media guidelines (Figure 3.2).

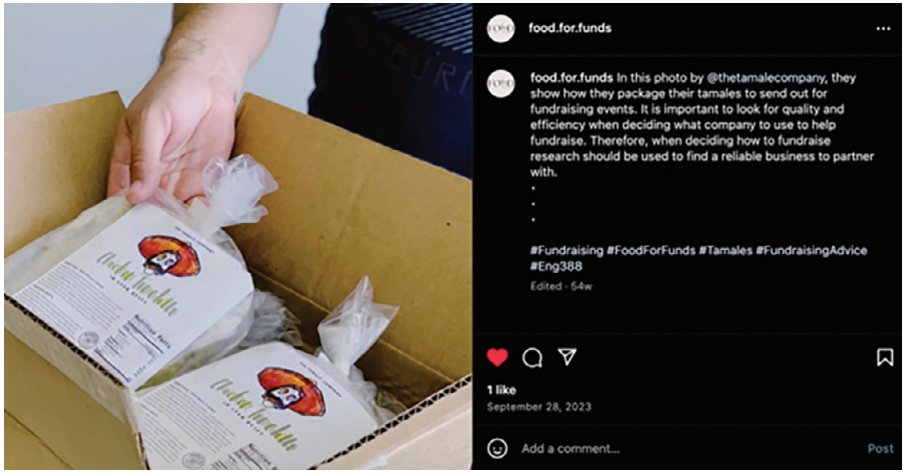

Figure3. 2. @food.for.funds shared an accessible social media post that briefly describes what's happening in the image, uses camel case for the hashtags, and chooses not to use emojis to ensure the information isn't obscured by a screen reader.

Additionally, we needed to discuss alt text because even though Instagram users can add it to their posts, it is not easily viewable. In 2023, accessing alt text on a post required the user to inspect the webpage and view the post's source code in a browser.[2] Therefore, students included a project memo alongside their Instagram posts that provided quick access to and demonstrated students' understanding of alt text.

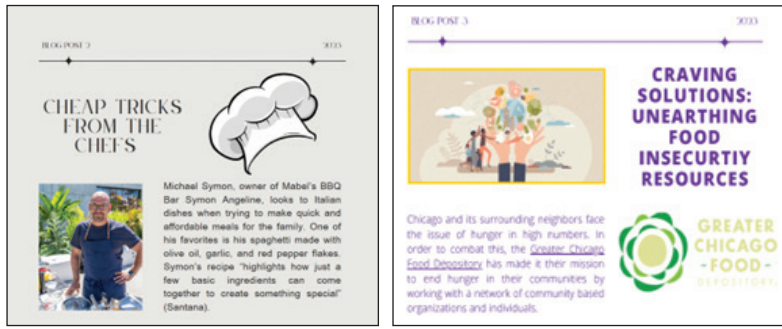

Figure 3. Madison's second blog post prototype (left) featured celebrity chefs who, in addition to Michelin Star quality food, provide followers with recipes for simple, affordable meals. After workshop, Madison applied WIU's Brand Guidelines to format a post on her new topic: food insecurity in Illinois.

As we moved into Project 2: Content Creation and Initial Website Design, we continued this recursive approach to prototyping websites rhetorically designed to fit the writer's content. Project 2's purpose was to research foodways and draft eight blog posts to generate content for their website. I provided a list of topic ideas—origin story, important chefs/cooks/scholars, media and your topic, gender-race-class politics, misconceptions and racial stereotypes, rewriting history, and defining community—and their final blog post required them to expand their ideas from posts one through seven to present their foodways research as a whole (am-beardsley, n.d.-a). They drafted blog posts and used Canva to test initial design concepts. Through workshopping their content and blog post layout, students played with and discussed accessible design like image placement, font style, size, and color and text alignment, which furthered their understanding of foodways. Initially, Madison's foodways research focused on the history and affordability of Cajun chicken pasta, one of her favorite dishes. But after our first workshop, she grew

2 The inaccessibility of alt text was still true when this article was written. Although users can enable "accessibility and translations," alt text was not included as a feature. Threads, Instagram's text-driven platform, includes automatically generated, editable alt text for all images, and users can enable the alt text feature via the accessibility tab (Meta, 2023). Because of its textual focus, we did not discuss Threads; however, one modification for future iterations of this class will include comparing platforms' accessibility.

more interested in the cost of food and food insecurity in Illinois, taking on a foodways research project that combined food and public advocacy to collect resources for audiences experiencing or working to combat food insecurity (Figure 3.4). Through blog post prompts that tasked students with empathizing to understand food and communities, prototyping, and testing, Madison discovered how food fits into her passion for community advocacy. Her work is just one example of how foodways and design thinking are interconnected.

For Project 3: Digital Portfolio – Hand-Coded Website, the final deliverable, students revised six blog posts and followed an inclusive design strategy that utilized simple design, arranged content logically, supported accessibility through self-explanatory wayfinding options, included alt text for all images, and had captions and transcripts as needed (Horton & Quesenbery, 2013). They created a multi-page website by modifying a website template. Although revising blog posts often meant conducting additional research, by Project 3, most of our foodways research was done, and it was time to apply the semester-long conversation about accessible design to website building. With foodway's emphasis on the interconnection of food and public advocacy, our time researching food's political, social, and cultural components prepared us to continue designing with accessibility at the forefront.

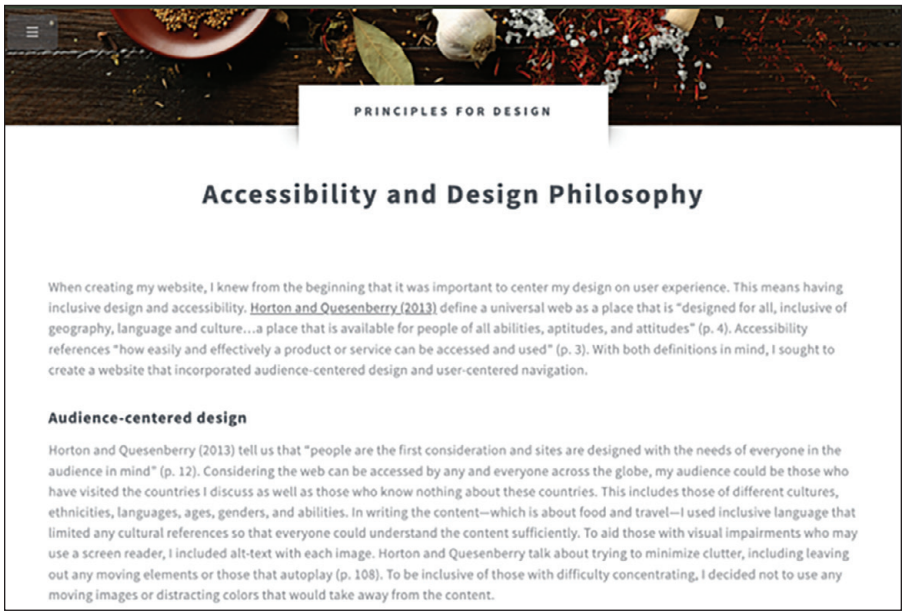

Figure 3.4. Emma's foodways research and website brought food and culture to the forefront through content and design. Her website's header used a map of the continents filled in with spices and grains. The image reflects Emma's food and travel blog posts while implementing a simple design.

Throughout all the projects, students reflected on how accessibility informed their content. Project 3 required them to write a statement that articulated how their design reflected their audience's needs and explained inclusive design (am-beardsley, n.d.-b). In Emma's accessibility and design philosophy, she expressed how audience-centered design and user-centered navigation informed her website (Figure 4). By writing the content, creating multiple prototypes, and testing design features during workshop, our design thinking approach embraced iterative design throughout the semester, prioritizing the user's experience. Overall, focusing on foodways across all projects encouraged students to think critically about the way they engage with two things that seem relatively commonplace: food and the Internet. Content drafted, we were ready to move into the *how* of web design.

GitHub Codespaces: Let the Coding Begin!

"Instead of beginning with writing code," said Stephen Quigley (2022), "perhaps we should start by reading it. Just as we introduce children to the sounds of language, we might begin by learning to listen to what the code is doing and saying." This was the approach I took, with a few additions, to introducing English majors to code because jumping into reading embraced design thinking in a way that gave students the space to succeed, fail, and learn to use their failures to move their projects forward. To provide some coding background, students first read about HTML and CSS. I assigned a chapter from Sarah Horton and Whitney Quesenbery's (2013) *A Web for Everyone: Designing Accessible User Experiences* that covered coding structure, defined essential HTML elements like tags and headings, and introduced the importance of stylesheets (pp. 49–64). Second, Quigley's (n.d.) Open Fuego instructions direct readers to download Brackets or Notepad++. While both code editors are free, open-source tools, I was concerned that students wouldn't have consistent access to the same laptop. I wanted to make sure they had access to their work wherever they were coding from, so I looked for a cloud-based alternative.

We used GitHub Codespaces, an instant cloud development environment, and had two classes dedicated to learning by reading and playing with code. The Codespaces editor uses a VS Code web client, so I felt comfortable introducing students to it because VS Code is my chosen editor. To get started, I directed students to the repository I made based on Quigley's (n.d.) Open Fuego index.html page (am-beardsley, n.d.-c). Then, I turned on a lowfi beats playlist and let them begin. Despite the chill music, the atmosphere in the room was panic-ridden. As they worked through the instructions in the index.html file, they grew frustrated when they couldn't figure it out

immediately. Incorporating design thinking's recursivity, we always closed class with a discussion board post reflecting on our work and what we still needed to do to keep track of our projects. Their reflections, which we used to redefine concepts and answer how we could move forward next class (Tham, 2021, p. 10), captured their experience.

One student said:[3]

> Today, I honestly haven't learned anything. I was thrown into a new world with an entirely new language that I didn't understand. I thought I followed the instructions well, but nothing was working and I had to scrap everything multiple times. I still don't have a working webpage, nor do I have a clue on where to restart. I can't even figure out how to add a link to what probably doesn't exist. *This feels really defeating and a huge blow to morale at the end of my school day* (Beardsley, 2023a, emphasis added)

I was crushed. I immediately began questioning if I was failing them as a teacher. What would I do if students couldn't create websites and produce a final project? Feeling defeated, I kept reading reflections.

Another student said:

> This has been a whole new experience for me, which was overwhelming at times. But overall, I am learning a lot and I know these skills are invaluable in the professional writing realm. I was able to get to the point of writing content for the page, but I still have things I'm unsure of. I found several things challenging, but one thing I still have questions about is how to insert photos into the code and change fonts. I learned that with coding, you cannot have typos and you have to know where to type the code so that it works correctly.

Overall, this student's response isn't too negative. They could see why we embarked on this project and noted that they needed to review the instructions regarding images and font color, indicating they knew the information was there. However, I still felt I'd made a substantial pedagogical blunder.

Returning to the course's foundation in design thinking, I realized that I, too, needed to embrace failure and use empathy to understand students' experiences as captured via the discussion board. Focusing on their needs, I reworked the next class's lesson plan and added a frequently asked questions and common

3 Thank you to the students who gave permission to be anonymously quoted.

errors section based on their struggles with the coding instructions. Before day two of what became fondly referred to as coding chaos, we started class with a what-do-you-know-about-coding freewrite. Students took five minutes to list everything they knew about HTML and CSS. I wanted them to see that they knew things. They defined elements like hero images and knew that HTML files begin with <!DOCTYPE html> followed by the language. The reflective approach I took to starting this class was informed by design thinking in that it embraced leaning into a perceived moment of failure—the struggle felt during coding day one—and highlighted what students knew about coding to show their success and empower them to apply their knowledge in response to the problem of coding. We were off to a better start. With everyone slightly more confident, I took them back to the repository with the instructions to show them the FAQ & Common Errors addition to the README file (am-beardsley, n.d.-d). I wrote the content based on what I saw them struggling with during the previous class, the conversations I had while helping, and the struggles they mentioned in their discussion post. The FAQs covered adding files to a GitHub repository, opening Codespaces, what a tag is used for, and how to open a port to view their website. Then, they partnered up.

They showed their partner what they had so far and asked them to help troubleshoot the issues they ran into last class, embracing collaborative problem-solving. Overall, their end-of-class reflections were much less abysmal.

> Again, I ran into several small challenges, but today was definitely better than Tuesday. My main struggle for today was trying to figure out how to change the width/height of images within the code so that they gel well on my site. This is still something I need to research/play around with. We helped each other here and there with things such as how to insert images into code," said the second student (Beardsley, 2023b)

And even the previously defeated student felt better:

> On Tuesday, we were thrown into the deepest abyss of coding in a 300-level English class with cinder blocks around our feet. I was having problems opening my site in another browser, but my partner figured out that we needed to drag the unzipped files into our photos file and it all finally displayed...I'm attempting to make small changes to percentages and text before doing anything drastic.

They emphasized how they helped each other problem-solve, which was exactly where I wanted them to be as they embarked on building their websites and saw that testing changes was a good way to see how the code responded.

Final Thoughts

When I began learning to code, my professor had us use a basic text editor and learn by writing. We, those of us taking ENGL 5133: Teaching Technical Writing, wrote that iconic first line of code: Hello, World! . Although we started by writing instead of reading, the atmosphere in the room was much like what I experienced with my students. The difference was we learned some code as graduate students interested in teaching tech writing with a user-centered design focus, while I expected my undergraduate students to go on and make a functional, multi-page website. Despite early frustrations and feelings of defeat, it was amazing to see the progress everyone made for their final websites. But one thing I didn't mention at the beginning of this article was that this was the first time I taught coding. So, what did I learn by giving students assignments where they had to problem-solve using an unfamiliar language and embrace self-teaching and failure? And how did I ultimately see foodways connected to coding? I learned I'd continue using Stephen Quigley's (2022) Open Fuego method and implement reading code as the first step, but I have four modifications to the course overall:

Teach design thinking's five phases (empathize, define, ideate, prototype, and test) and be transparent about their connection to our recursive process.

I chose not to include these terms in the course because I didn't want students to feel like Writing for the Web simply repeated what they learned in Technical Communication; however, reviewing the terms would only strengthen their understanding while other students would more explicitly learn how to apply design thinking.

Introduce HTML and coding earlier in the semester.

Students were familiar enough with social media that Project 1, which required them to apply empathy to create Instagram posts, was pretty simple. By learning HTML earlier in the semester, students will have more time to implement the recursive design process and usability test their website.

Develop a set of class templates to decrease the mental labor needed to simultaneously review 10 unique websites.

I introduced HTML5 templates and encouraged them to have ChatGPT create the initial HTML and CSS, but they opted to use HTML5 UP templates. I assumed most of them would use the about me pages they created as a starting point; however, only one student chose that option (ecortelyou, n.d.). While this choice wasn't terrible, it meant I had to move between different

templates and re-orient myself each time a student asked a question. Currently, I'm modifying a few HTML5 UP templates to build a class set that students will use so that when I *do* need to step in and assist, I know more about the code they're working with.

Build in more in-class coding and mini-website review days to foster collaborative problem-solving.

We had a fair amount of in-class work time, but incorporating more days where we're in the same room reading and writing code will give us more opportunities to fail (and succeed) together.

To that end, having students conduct foodways research while learning how to code embraced the ways that both food and web design are connected to public advocacy. Students explored how the two come together to rhetorically construct public-facing texts examining how food and design are connected to power. By combining foodways and design thinking, students foster greater empathy for themselves and the users who interact with their work.

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