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Basho & Friends: Haiku as Play Verse for an Accessible Digital Humanities Experience

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Introduction

What insights for literacy do game designers offer writing educators? Video games challenge the player. If the player accepts this challenge, they try out novel approaches and interpretations to play the game. When the game creates a ‘pleasantly frustrating’ experience, to use linguist and video game scholar James Paul Gee’s phrase, the player feels motivated to keep playing in a fun and immersive world. Games that integrate images, text, gestures, and sound promote types of literacy that schools often miss in their curricula designs. “We never just read or write,” Gee observes in his book *What Video Games Have to Teach Us About Learning and Literacy*, “rather, we always read or write something in some way” (Gee 14). As a scholar of cognitive science and language, Gee broadens the definition of literacy. Beyond the internal experience of decoding and encoding text, literacy is a social practice. According to Gee, a person who can discern patterns in a situated, social context, and then apply these patterns to new contexts, is practicing literacy. This means diverse social domains require unique literacies. To play a computer game, a child works with a unique grammar and social setting, a unique ‘literacy’. Schools tend to emphasize a narrow form of literacy, decoding and encoding print texts, and undervaluing the potential of new literacies, such as the video game.

Consider children in the United States from low-income homes. These children grow up in households impacted by intergenerational systems of social and economic inequity. According to a research study by the Center for American Progress, by age two, children from low-income families are six months behind their peers in critical language development and learning skills. By age six, children from low-income families will have spent 1,300 fewer hours on enrichment activities, such as music lessons, than their peers at the other end of the economic spectrum. Their learning environment presents more environmental stressors than that of their peers. Well before their first day of kindergarten, gaps in literacy open. All too often, these gaps never close (Center for American Progress, “Economic Benefits of Closing the Educational Achievement Gap”).¹

As a high school English student-teacher in Providence, Rhode Island, I witnessed this divide. I worked with secondary students who had transferred from a conventional educational setting for reading and writing to an arts-based portfolio program. According to State Standards, many of these students struggled with secondary school level reading and writing. I aimed to integrate arts-based learning into the English literature classroom. At times, the students I met expressed what education scholar Herbert Kohl

calls a will *not* to learn in his essay “On Not-Learning” (Kohl 17-20). Here, students who experience repeated disenfranchisement in school, by being identified through ‘failure,’ stop putting in the effort. Yet some of these same students channel their energies into video games. They form communities around the games they enjoy, communities with their own languages and ways of relating. Multiple communities might spring up around a single game—including ‘maker’ communities. Here, makers modify the original game. They share the modified game, renovated or reimagined, with peers. I observed that these same students did not engage with the authors in the writing classroom. They didn’t identify with the authors or see themselves as part of a community of writers.

In this essay, I’m presenting a digital humanities project that’s attentive to the unmet literacy needs of my former students, which began early in their education. This project is collaborative and experimental. We imagine students engaging with this project in a writing classroom, facilitated by an educator. Our writing classroom may have resource constraints, but it should have computers available to play games. This project works with the exemplar of haiku poetry in Japan, and the historical, social, and cultural context that surrounded it in the Edo period during the 17th Century. Our project is a story-based game, which integrates episodic stories with interactive writing prompts. The primary gameplay loop involves players collecting ‘season words,’ traditional keystone words in Japanese poetry, to create a haiku. It is told through a *haibun*, a style of travel journal invented by the poet Basho, which caps brief prose-poems with haiku. With each haiku written, the player can move toward a goal of harmonizing the protective spirits of nature with the growing needs of a nearby village. The game progresses in step with the changes that appear in spring, summer, autumn, and winter.

A haiku is brief. A poem in a breath. Yet in a compact way, a haiku packages profundity. For over a thousand years, in both ceremonial and informal settings, Japanese poets wrote in cadence with the seasons. Each haiku includes a *kigo*, a seasonal word: Cherry blossoms may signify spring; the song of the cuckoo, summer; and the cry of the forest deer, autumn. Publishers even produced vast seasonal dictionaries, *saijiki*, where poets could draw upon the right word to evoke a season. This convention continues today: Haruo Shirane, scholar of Japanese literary culture at Columbia University, observes

[i]t is considered proper etiquette in Japan to begin all personal letters with an observation about the present phase of the season[...] This custom, which is taught in school and begins very early in Japan, creates an elegant greeting, with the seasonal

reference becoming the epistolary version of the seasonal word in haiku (Shirane, *Japan* 101).

While writing a letter, Japanese schoolchildren take part in a literary culture that puts nature at the forefront through the wisely chosen seasonal word.

At only three lines and seventeen syllables, haiku offer an approachable framework for young writers. At the same time, many young learners are already familiar with Japanese video games, anime, and manga.² They might not know about the roots of these forms of entertainment in the social and cultural traditions of Japan. Almost 100 years before the Super Mario Bros game was released, Nintendo was founded to sell the popular *hanafuda*, a card game that uses the culture of the four seasons as its theme (Shirane, *Japan*).

Figure 1": "Hanafuda 06" by Forgemind ArchiMedia is licensed under CC BY 2.0

Haiku composition provides a potential setup for future literacy development. A guided haiku practice—where the student writes multiple poems that vary on a theme—can help develop fluency and shape an authorial identity. The practice can become a precedent for future making and creating beyond this introductory game, in formal and informal learning settings.

Our Project, *Basho & Friends*, is an interactive storytelling game based on writing haiku. Here, the player can acquire knowledge about how to write haiku. The game is framed by

young Basho's early exploration of nature with his real-life friend, Yoshi, and an invented sister named Kiku, around the castle where he grew up.

Figure 2: Concept sketch for opening screen by Joshua Korenblat.

My collaborators and I intend to promote inclusive educational outcomes for learners, age ten and above, who have already begun to play video games with their friends but are unfamiliar with the traditional western canon of literature (Takehana).³ Especially, we aim to support children in urban and suburban settings who lack frequent access to nature. The learning outcomes for our game include conventional literacy (the ability to read, understand, write, and infer meaning in a text), an appreciation for the culture of Japan, and an understanding of our ecological commons. At present, the video game will include a tutorial and an interactive episode.

Through an iterative process, we plan to unify the divergent concepts described in this essay—from a computer game to an augmented boardgame—into a playable prototype, in Unity or HTML 5, and a website. This website would serve as an educational platform about Basho's world of haiku, with the video game at top, followed by other projects,

essays, and a toolkit of educational resources. The video game would serve as a hook, while the website allows visitors to explore more. Visitors to the site would include children playing the game, educators, and parents—and anyone new to haiku in its original context.

The purpose of this essay isn't to argue for video games as potential partners for classroom learning; for that, Gee has written convincingly on the topic, based on experience and research. He considers what we learn about learning from well-designed video games, and to what extent video games can integrate into conventional curricula. He provides compelling arguments that video games can help support the creation of new identities in students as active learners and critical thinkers.

Instead of making an argument, I'm explaining the process of creating concept sketches for an eventual digital prototype, what design educator John Spencer calls 'vintage innovation' methods that can work even with time and resource constraints. Although video games have become much easier to produce, our idea could also work as an inspiration source for designers of learning experiences who work with greater constraints. As Spencer notes, with vintage innovation thinking, instead of 'flashy and new,' the designer thinks of what's 'better and different' for the people they intend to support (Spencer 26). Designers present 'mishmashes' of old and new ways of doing things. With vintage innovation, Spencer believes that educators can design learning experiences that avoid a technology-first mindset and instead focus on empathy. Technology—however innovative and even flashy—can distract designers from their empathetic, human-centered purpose.

We believe the eventual prototype for this game, once tested by our target audience and iterated based on their feedback, has the potential to fulfill the three criteria that Gee outlines for active learning and critical thinking: "experiencing the world in new ways, forming new affiliations, and preparation for future learning" (Gee 23). As Gee notes, these criteria correspond with the types of video games that can be effective in classroom learning, which provide concentrated tutorials, 'just in time' guidance, gradual information, and opportunity to situate projects in an experience.

Students disengage with learning when their needs, goals, and current capabilities are mismatched with the environment in which they must learn, creating pain points they want to avoid. Over time, this failure can become part of a student's identity, creating a negative feedback loop where more experiences with the mismatch yield more negativity about literacy and learning. This is what designer Kat Holmes calls exclusion in the designed world, in her book *Mismatch: How Inclusion Shapes Design*. In contrast,

inclusive design considers those most mismatched and offers them multiple ways to participate in the designed experience. The designed world presents many inclusive designs that transcend demographics to support underserved or mismatched users.⁴ As Herbert Kohl writes about school, “[f]ailure results from a mismatch between what the learner wants to do and is able to do” (Kohl 17). Many people are permanently mismatched because of how society is organized and designed. And anyone can find themselves in situations where a temporary or situational mismatch might occur.

This game is meant to serve those temporarily or permanently mismatched. By situating haiku-making in a story-based game that utilizes easy game mechanics, underserved children could benefit—and so could adults in literacy and poetry programs. It might also appeal to those who enjoy historical settings or pleasant, non-competitive games like Nintendo’s *Animal Crossing*.

When I worked in the Art Department at *National Geographic Magazine*, we tried to design our information graphics so that they would be readable for sixth-graders—even though most of our readership was far older than that. If a sixth-grader could understand the information graphic, we reasoned, so could a sixty-year-old. For our project, we began with our intended user as this sixth-grader: eleven or twelve-years-old. However, we eventually decided to lower the age level to ten-years-old. Even though the thinking style of ten-year-olds presents design grammars distinct from what sixth-graders and older ages might expect, we believe that the *National Geographic Magazine* rule of thumb could apply here too. The lower age threshold creates a mandate for clarity and intuitive design which makes it accessible for adult learners, too. The project intends to be a beginning, not an ending, for learners who might want to write more haiku poetry. In doing so, they might also want to learn more about the values that have sustained haiku through the centuries, and which contribute to our well-being, philosophical and ecological, today.

Basho & Friends intends to put students at the center of a writerly experience by acknowledging haiku’s oft-forgotten origin in playful, linked verse. At the same time, it provides learners access to rich funds of fact-based knowledge about haiku and the culture of the four seasons in Japan. Its design pillars include: guided haiku making to develop competence and interest in haiku according to its original key elements, and introducing newcomers to the social and cultural context of Basho’s world.

Such a game can provide a greater correspondence between reader and writer and create positive memories about writing creatively. While the project situates the context in a time and place in Japan to promote cultural appreciation, we also intend that the game be part of a curriculum that’s scaffolded so that our haiku-makers take a step outside the

game, and into their classroom setting and the world. This scaffolding would be on the web site platform. I’ m assembling resources—creative, informative, and pedagogical—which can become a toolkit for educators. With these resources, the teacher can encourage learners to make haiku in their own world. Learners can apply Basho’ s keys for writing haiku to their lived experience. Teachers can prompt students to apply Basho’ s guiding principles to notice what they might overlook in daily experience, transforming ordinary spaces into poetic places, and to do so as part of a community of writers, their fellow students.

Methodology

Phase One, Research and Story: Blue Sky and Slow Boil

We used two research approaches to designing this game, *blue sky* and *slow boil*. Game designers Brenda Brathwaite and Ian Schreiber describe these approaches: “Pure blue-sky design allows designers to consider lots of possibilities and ideas with few exceptions imposed by time, money, interest, or all of the above[...] Blue-sky design assumes no constraints other than the designer’ s imagination” (16). This approach corresponds with designers who begin with the ‘why’ rather than the ‘what’ and the ‘how’ —as an engineer or developer focused on mechanics, rules, and code might do. Here, the designer focuses on the benefits to the user first, rather than on features and requirements. At the same time, given we are working outside our own culture, this approach also requires a ‘slow boil.’ By grounding the fictive elements of the story and game in research, we can honor Basho’ s world and do our best to avoid cultural appropriation. Brathwaite and Schreiber describe how this works: “When given a theme and a setting...designers begin what can only be considered a massive research mission, but one that often has little direction as long as it encompasses the theme.” The ‘slow boil’ approach helps designers avoid “forcing a game out too early or not giving it enough time to develop.” (Brathwaite and Schreiber 16). This is our approach to researching this idea, while discovering and developing this idea into shareable concept sketches.

Basho & Friends Story Development

Much like the *haibun* travel journal combines prose narratives with haiku poems, our idea combines a story with playful haiku making. The story is presented in Basho’ s journal as an incomplete *haibun*: the capping haiku are missing. It is up to the player to write the capping haiku to advance through the four seasons. The game begins in early

Spring, when Basho is aged 12, serving in the castle at Ueno. According to the Japanese lunar calendar, spring begins in February, meaning there's still fresh snow on the ground, but plum blossoms are blooming, and the bush warbler is singing. Basho and his friends Yoshi and Kiku play *haikai*, a popular linked verse poem, forming a *za*—the group of poets required to make a linked verse poem. This serves as an introduction to linked verse play, the oft-forgotten origin of haiku.

Time passes, and soon the cherry blossoms bud and fall in the breeze. Through their sensitivity, Basho and his friends connect the nature outside them to their creativity within. They discover they can listen to the voice of rocks, plants, and trees in a way that the adults around them cannot. We can find this listening intent in Basho's writings:

“Every form of insentient existence—plants, stones, or utensils—has its individual feelings similar to those of men” (Robert Hass 237). The ‘slow boil’ research revealed that it took a lot of work for Basho to discover the principle of *karumi*, or lightness, in his poems. In our story, this journey to lightness began through listening. As a young poet, Basho is sensitive to the muted cry of nature from its protective spirits.

As trees fall, the village grows. One day, an emissary from the nearby *satoyama*, a mountain farming village, visits Basho and his friends: a rabbit. They are astonished to learn they can understand the rabbit too. The rabbit informs Basho and his friends that their habitat is being threatened by the growing needs of the town. Workers are damming the river to divert water to the rice fields, threatening the frog and turtle; trees are being cut down for wood, threatening the bush warbler; flowers are being paved over for roads, threatening the butterfly; the mountain blueberries are being plucked for food, threatening the bear, and the forests are being cut down, threatening the deer.

Basho and his friends will need to write haiku to give voice to the animals. When they complete the haiku, they place a poetry ribbon in a nearby tree. Any person who reads the poem will now have a greater awareness of the nature around them. In response, *kami*, protective nature spirits from Shintoism, appear to protect nature. Completing a *haibun* allows the player to turn the page and continue the journey. By completing haiku for all four seasons, the player completes the *haibun*, protects nature and the animals' habitats from human development, and wins the game. The player must perform a final linked verse poem in the town square, for all the people to see, while nature fills up with the protective *kami*.

Figure 3: Storyboard sketches that introduce the prose-poem narrative, by Joshua Korenblat.

Phase Two, Diverge: 'Blue Sky' Discovery Sketches and Concept Development

'Blue sky' discovery sketches can be seen here, by Anurati Srivastva and me:

Figure 4a: Discovery sketch by Anurati Srivastva.

→ visual prompt opens up.

WRITE YOUR HAIKU

What do you see?

What do you hear?

What do you feel?

Figure 4b: Discovery sketch by Anurati Srivastva.

Figure 4c: Discovery sketch by Joshua Korenblat.

These sketches are rough and suggestive, intended to make thinking visible as part of a personal ‘blue sky’ discovery process. We believe it’s important for each collaborator to have time away from group brainstorms, to discover and develop individual ideas without fear of judgment. Then, we distributed our individual thinking to the group. We used these sketches as part of longer conversations, the way writers might collaborate on a Google Doc. Then, we refined some of the sketches into concepts, so that they could communicate to people with less direct guidance from us. While discovery sketches make internal thinking tangible, concept sketches make our thoughts more vivid and shareable, for the purposes of communication and conversation. The sketches aren’t about aesthetics. Instead, they function more like writing than art in discovering and

developing ideas. This process explains why the concept sketches presented here have styles unique to each creator—similar to individual writing styles—even as we work in a group.

For example, each of us has created concept sketches for a game that could stand on its own, as shown in this concept by Anurati Srivastva. The concept here shows our eventual goal to have a light amount of text, and an open and intuitive interface. Children who make haiku get rewards, such as delightful animations. The haiku making is an open prompt, emphasizing mindfulness over the details of haiku-making.

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Figure 5: Video game concept sketch, video by Anurati Srivastva.

This next concept sketch sequence, by me, shows a potential core mechanic of collecting words from images in an environment. This concept focuses more on guided haiku making, according to some of Basho's foundational haiku keys: juxtaposing two words, identifying a seasonal word, capturing a verb, adding detail, finding form, and making sure there is a surprise.

Figure 6a: Video game core mechanic concept sketch sequence, by Joshua Korenblat.

Figure 6b: Video game core mechanic concept sketch sequence, by Joshua Korenblat.

Figure 6c: Video game core mechanic concept sketch sequence, by Joshua Korenblat.

Figure 6d: Video game core mechanic concept sketch sequence, by Joshua Korenblat.

Figure 6e: Video game core mechanic concept sketch sequence, by Joshua Korenblat.

For her concept sketches, Julie Finton worked with this core mechanic too, to see how simple animation would help us to explore how this core mechanic might work. Players click the words on the screen to ‘collect’ them. After the words are collected, they can be used to write the haiku. Julie also developed a tutorial for slightly older students in mind (a sixth grade reading level). Here, students can interact with Basho’s poems, some of which might be too abstract for younger reading levels.

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Figure 7a: Video game core mechanic concept sketch and tutorial, video by Julie Finton.

Visit the web version of this article to view interactive content.

Figure 7b: Video game core mechanic concept sketch and tutorial, video by Julie Finton.

As designer Bill Buxton notes, concept sketching is a form of questioning, while prototypes are answers to specific questions. He calls this the difference between problem-setting and problem-solving; ‘getting the right design’ versus ‘getting the design right’ (Buxton 78). During concept sketching, we can explore, examine, and navigate ideas. Through concept sketching, we also asked ‘what if’ questions to acknowledge resource constraints in prototyping this idea, such as what would this be if it were a board game? What would the most straightforward prototype be, one that could be made and even produced using ‘vintage innovation’ materials? To find out, Sweta Pendyala and I created a board game concept that could stand on its own. This boardgame combines a *hanafuda* card deck, available to order online, with a straightforward path-based game. The board game consists of a physical game board divided into the four seasons. A printed, physical, incomplete *haibun* journal introduces each season. The *haibun* journal has a QR code for each location on the game board, so the player can scan it with their phone and be introduced to interactive tutorials, animated introductory sequences, and gameplay to practice writing haiku poetry. These digital stories complement the tangible board game.

To play the game:

1. The player rolls dice to pick an animal: eggs/bird; hatchling/turtle; tadpole/frog; caterpillar/butterfly; fawn/deer; kitten/cat; (baby bunny)/rabbit.
2. The player picks a season card based on the season they are positioned on.
3. The card will have a season word on it.
4. The player writes a haiku, with the season word occupying one of the three lines.
5. Fellow players score the haiku according to a grading plan based on haiku keys 1-4: here & now (greeting to the animal), form (three lines, one breath), season (season word), image (adding details), and surprise (inclusion of a cutting word and juxtaposition of unlike things).
6. The player gets a bonus point for matching up the animal with the right season according to traditional Japanese culture.
7. The player gets to move the number of steps according to the point score, along the stony path.

The player presents the completed *haibun* of all four seasons to town officials. To win the game, the player must join with the animals, led by parents, siblings, or friends, to collaborate on one linked verse poem that has all four seasons in it. The poem will be judged by its inclusion of all the haiku keys (described later in this essay), with the new one being *shiori*, compassion for vulnerable creatures and things.

Figure 8: Game board concept sketch by Sweta Pendyala and Joshua Korenblat.

We've shown that discovery and concept sketching are generative. The concepts diverge, like a showerhead. Why diverge? To get the right idea, it's better to have too much than too little. This is the reason why in any editorial project, we have professional editors rather than adders. We don't know which approach is a better fit of form to context until we make the concepts. Then, after further work of exploring, examining, and experimenting on these concepts, they reduce, refine, and converge into a single prototype. This is a more critical, reductive process. Unlike the showerhead during the divergent process, the metaphor here changes to a funnel, to collect, edit, combine, and distill the ideas that can converge into a prototype. Here, we think of the potential benefits first and then ask questions through rapid concept sketching. This is what Buxton means by 'getting the right idea' before 'getting the idea right.'

To assess a unifying prototype, it helps to have criteria. A prototype might answer questions proposed in the concept sketches about the game's context, architecture, mechanics, and poetics (CAMP). This acronym for user experience design in games was coined by design educator Christina Wodtke.⁵

Getting the Right Idea with Design Thinking and the Design Sprint

Discovery and concept sketching need a reliable structure, loose yet defined, so they lead to a proof of concept, a prototype. We chose Design Thinking and the Design Sprint.⁶ We studied our users and their needs, based on in-person teaching experience. We researched frameworks, themes, and gameplay mechanics. Through concept sketching, we asked, how might we connect, recombine, and remix ideas in creative ways to create an experience that supports our intended audience? Then, we practiced divergent thinking through writing and sketching: navigating, examining, and experimenting on ideas, until we had several concepts that could help us answer questions about how to iterate this project into a playable prototype.

While Design Thinking takes many forms, according to the University of Minnesota Open Educational Resource book, *Introduction to Design Equity*, it has common traits: “Design thinking today has become a sort of ‘umbrella term’ that refers to any multi-disciplinary, human-centered project involving research and rapid idea generation” (Miller 47). The Nielsen Norman User Group, one of the leading user experience research teams, further claims that Design Thinking is at once an ideology and a process:

The design thinking ideology asserts that a hands-on, user-centric approach to problem solving can lead to innovation, and innovation can lead to differentiation and a competitive advantage. This hands-on, user-centric approach is defined by the design thinking process [...] The design-thinking framework follows an overall flow of 1) understand, 2) explore, and 3) materialize. Within these larger buckets fall the six phases: empathize, define, ideate, prototype, test, and implement (Gibbons).

Although Design Thinking has existed since the 1950s, today it has become popular worldwide for discovering and developing human-centered, inventive ideas.⁷ As a subset of Design Thinking, Jake Knapp of Google Ventures developed the Design Sprint, which proposes and tests ideas in just five days. In contrast with the drawn-out ‘slow boil’ research, we produced work in swift iterations, emulating the Design Sprint. This allowed us to generate ‘blue sky’ ideas. The Design Sprint typically does not use any new technology: it's focused on ideas using pens, paper, and sticky notes. Stakeholders in the

project gather together and in five days, sketch and ideate, and create a prototype that can answer specific questions about a final version of the product.

These ‘vintage innovation’ constraints seem to enable the type of abductive reasoning—the creative leap—that’s specific to the Design Thinking domain. At the same time, it keeps our focus on empathy for the user rather than flashy technology.

Background: Why Basho’ Story Benefits Literacy Learners Today

Reason One: Experiencing the World in New Ways

When designing the aesthetics of such a game, it helps to keep in mind students who live in more stressful home environments. They might lack access to the type of visible nature that infused Basho’s world, a world which Shirane calls ‘primary’ and ‘secondary’ nature. In Basho’s time—and for a thousand years before him—culture mediated depictions of nature in artistic and literary works. Urban people sought to access an idealized nature from their home through design: layered robes that depicted seasons, tea ceremonies, flower arrangements, and paintings of poetic places like the cherry blossoms of Mount Yoshino. These designs were all far removed from the real pastoral experience of farming villages: heat, insects, floods, and toil. Shirane calls this practice an extension of nature, a secondary rather than primary nature (Shirane, *Japan* 258). Basho and his circle looked at once to the past, cultivated through high art and in urban centers, and to the present.

These dualities, between the earthy and the ideal, suggest an aesthetics for the game. We can place the student in the idealized setting of a personal journal when in the hand-painted *haibun*, and then in more immersive settings that have aspects of realism when in the haiku interactives. These settings might resemble the popular ambient settings in Youtube channels like the *Guild of Ambience*. In this way, students encounter ‘secondary nature’ and ‘primary nature’ through story and play.

Figure 9a: An idealized setting, by haiku poet and painter Yosa Buson.

Visit the web version of this article to view interactive content.

Figure 9b: A typical nature video from the *Guild of Ambience*.

By situating themselves in the context of Basho' s world, players access humanities scholarship—such as Japanese haiku in the cultural context of secondary and primary nature. This type of knowledge might otherwise remain distant to them. The common pattern of acquiring knowledge in school is to learn first, do later. Games invert this pattern, allowing learners to play first, and then learn from the experience. Experiential learning can take place at school, with a well-designed lesson plan that builds in opportunities for thinking, making and reflecting. Playing can lead to meaningful learning.

Reason Two: Forming New Community Affiliations

In Basho' s Japan, play, experimentation, and dialogue informed the production of literary work. Basho and his circle of poets held collaborative parties to produce popular linked verse poems, called *haikai no renga*. Basho would evolve the opening verse of these poems, produced during a game, into a much shorter form of writing. They provide a direct exemplar for writing pedagogy today, which is not just about the content, but about the social setting in which all learning and making occurs. Basho' s culture emphasized rules, constraints, and variations on a theme through dialogue—not pure individual expression. These cultural attributes create a scaffolding that newcomers to haiku can use like garden trellises to grow their ideas.

Basho, birth name Matsuo Kinsaku, grew up just outside of Kyoto in 1644. His father was a low-ranking samurai who taught calligraphy to earn his living. At an early age Basho left home to serve in a castle near the town of Ueno. Here he befriended a young heir to the castle named Todo Yoshitada. Basho and his friend learned how to practice *haikai*, linked verse poetry. Yoshitada, however, died at the age of 25. In mourning, 29-year-old Basho would leave for the bustling capital city of Edo, the seat of the Tokugawa shogunate in present-day Tokyo, to “establish himself as a *haikai*master who could charge fees for his services” (Shirane, *Traces* 18). Basho was no Mozart of poetic art. Scholars consider his early work unremarkable. This biographical fact is relevant for the fictional story in our project. The player corresponds with young Basho, who I believe will be more relatable to them than the wizened sage he would become. Over time, Basho, using the pen name Tosei (Green Peach), worked doggedly at this poetry. He gained a following of patrons and disciples. At age 37, he left Edo for a hermitage on the banks of the Sumida River.

According to a popular story, one of Basho’s followers, Rika, gifted him a *basho*, a diminutive banana tree, to plant next to his hut. This banana tree became eponymous with the poet: Basho took it as his final pen name. Later, a fire that consumed Edo would destroy Basho’s hermitage. This event sparked Basho’s peregrinations for much of the ten years that remained of his life. He kept travel diaries during this time, and invented a new type of poetry, the *haibun*, a prose-poem travel journal. Basho would cap a brief prose introduction with a *hokku* verse—the three-line, seventeen syllable poem that originally served as the opener for a linked verse poem. These travel diaries impress upon modern readers a romanticized view of Basho as solitary poet who lived on the margins of society. This is inaccurate. Basho developed his writing craft with others, through guided practice in situated learning environments, and through games.

Haiku, in fact, has the literary term *haii* in its name, which means ‘comic’ and alludes to popular linked verse in Japanese (Shirane, *Traces* 294). The word ‘haiku’ harkens to its origin as a social game, playful and convivial, which poets like Basho and ordinary citizens would play. Today, we consider haiku a swift sketch of life, made by solitary figures. Yet this notion of haiku only arose in the late 19th century when Meiji-era Japan opened to the world after more than two centuries of isolation. A trailblazer of contemporary haiku poetry, Masaoka Shiki (1867–1902), met a school of Japanese painters who had begun to paint in newfound Western styles. From this painting school, Shiki adopted the “sketching from life” philosophy for haiku poetry. In 1893–94, Shiki wrote a series of articles about Basho, titled “Chat on Basho,” in the newspaper *Nihon*. In these articles, Shiki popularized the “sketching from life” notion of haiku that

Western Imagist poets, such as Ezra Pound, would later embrace. He also snipped the *hokku*, a three-line verse that began a *haikai no renga*, the popular linked verse poem, from its original context. In doing so, he coined the word *haiku*. Shirane notes that Shiki “condemned *haikai* linked verse, which he regarded as a trivial social game and declared that only a *hokku*, the seventeen-syllable opening verse, which he referred to as *haiku*, had value. ‘The *hokku* is literature. *Renga* and *haikai* are not’ ” (Shirane, *Traces* 37).

Through these articles, Shiki’s newly minted haiku became a popular part of a cultural traffic between contemporary Japanese and Western poets. Basho’s centuries old haiku, taken out of context, painted a portrait—however misleading—of a spiritual ascetic, a traveler without a home. Amidst this traffic, the origins of haiku as ‘play verse’ dimmed.

For Basho and his circle, *hokku* took place in a social place where poets gathered, called a *za*, and “more broadly, it means the dialogue and communal sense that arises from linking verse together” (Shirane, *Traces* 299). The *hokku* was a social greeting, a three-line verse from a guest to the host of a party of poets. The *hokku* greeting verse could be rewarded with a flower arrangement, starting a game of linked verse called *haikai*, a modernization of *renga* (classical linked verse). The linked verse poem would often unfold as a game of collaborative wits between poets through the *kasen* framework: thirty-six linked verses written on two double-sided sheets of paper called *kaishi*. The guest would provide the first seventeen syllable verse; then another poet would cap this verse with a new fourteen syllable verse, and the poem would progress from there through word links to the distant past, the recent past, and what Basho called “scent links” to the present.

An elaborate set of rules structured the literary gameplay here. The verses traversed classical themes of the four seasons, love, and daily life—in vernacular and sometimes even vulgar terms. The poets advanced *haikai* spirit, an imagination that could encompass esteemed past poets, while enfolding everyday life into the surprise final lines of their verses. These poetry games were sometimes scored with points, and they became a popular form of entertainment, a way for everyday people to connect to a poetic practice.

In *The Heart of Haiku*, an anthology and biography of Basho, poet and essayist Jane Hirshfield said that in linked verse games, “writing provided both a party and a playing field in which intelligence, knowledge, and ingenuity might be put to the test” (Hirshfield ch. 1).

However restless, Basho worked with many poets who studied under him, and this discourse, often conducted through linked verse, was social and dialogic. Basho's ever-changing circle came from all social classes: samurai, doctors, devoted Zen Buddhists; rich and poor alike. He had one well-known female disciple, named Shiba Sonome, or Madame Sono, who hosted one of his linked verse poetry gatherings. The *hokku* he wrote for this occasion might seem like a sketch from life, but it was actually a greeting that complimented the host:

gazing intently
at the white chrysanthemums—
not a speck of dust
(Shirane, *Traces* 26).

“Even Basho's famous frog poem,” Shirane writes, “has been interpreted[...]as a greeting to the host from the poet (frog) who is lodging at (jumping into) the residence of an old friend (the pond)” (Shirane, *Traces* 26):

old pond
a frog jumps into
the sound of water
(Reichhold 59).

These poetic hosts could be contemporaries. But they could also be poets from classical and ancient times, too, who Basho visits during his journeys to *utamakura*, classical poetic places—established by conventions of literature and seasonal almanacs—and *haimakura*, new poetic places, which he discovered in the ordinary world around him. Basho looked to the present to invigorate old ideas. He called this practice of looking to the past and the present, “awakening to the high, returning to the low” (Shirane, *Traces* 28-29). While awakening to the high, the poet walks the path of classical Chinese and Japanese poets through the four seasons, the conventional working material of poetry. Here, in accord with centuries of poetic prescription, the bush warbler amidst plum blossoms and snow means early spring; the call of the cuckoo means summer; the crickets, the deer and its lonely cry, mean autumn. Returning to the low, Basho sought to observe commoner life and everyday experience, and bring these observations into a

surprising union with the classical past. For example, the traditional motif of early spring, the plum blossom, juxtaposes with a surprising observation of daily life.

the scent of plum

a series of storybooks

for children

(Reichhold 173).

We can imagine a vignette: a person beneath a plum tree, reading storybooks to children. Basho sought out new, unremarkable places and moments that could become *haimakura*, the poetic places of *haikai*. Together, the high and low yields a novel, often witty effect of juxtaposition and allusion called ‘double vision, *mitate*. In the game *Basho & Friends*, the player’s *haibun* helps villagers appreciate the ordinary abodes of the animals who live there as poetic places, to be preserved.

Mitate takes the reader to the past and present at once to create a double-take, contradicting the more modern idea of haiku as simply a sketch from life. By learning about Basho’s world, teachers, students, and digital humanists reunite poetry with frameworks of collaborative play, making the form more accessible to children who like to play but don’t consider themselves poets. As in Basho’s world, exemplars from a long ago, distant past can coexist with present observations, forming new affiliations between students and the writers they study.

This project also provides an example of how digital humanists can increase access to knowledge and wisdom. Much of the research behind the game delves into specialist knowledge of haiku and Japanese culture. Our game will introduce students to a cultural legacy that many children know through popular, decontextualized forms such as anime, manga, and Nintendo video games. Through the multimodal literacies they already consume and practice—sometimes in actual subcultures—children can develop community affiliations with makers of poetry.

Reason Three: Preparation for New Learning

Haiku is a semiotic domain, a concept that Gee described in his advocacy for video games as potential classroom learning partners for children. Gee explains: “By a semiotic domain I mean any set of practices that recruits one or more modalities (e.g., oral or written language, images, equations, symbols, sounds, gestures, graphs, artifacts, etc.) to communicate distinctive types of meanings” (Gee 18). He describes semiotic domains as

cultures and subcultures that produce content with distinctive internal design patterns. They are sustained and grown by people who develop a distinctive way of thinking, communicating, conversing, collaborating, and co-creating this content, and these interactions create a common ground of shared meaning. He asks if you, the reader of his book, can discern the patterns of modernist architecture. He then asks, “Do you know what counts as thinking, acting, interacting, and valuing like someone who is ‘into’ modernist architecture?” (Gee 30). The first scenario is an internal semiotic domain: the content. The second scenario is the external semiotic domain: the situated content, and the people, that surrounds it. “Any domain can be viewed internally as a type of content,” he writes, “or externally in terms of people engaged in a set of social practices” (Gee 26). He continues, “Content, the internal part of a semiotic domain, gets made in history by real people and their social interactions. They build that content—in part, not wholly—in certain ways because of the people they are (socially, historically, culturally)” (Gee 29).

Internal Semiotic Domain: The Content

With Gee’s concept of semiotic domains in mind, we can identify and transfer the key content, and the design patterns, of Basho’s poetry to today’s learners. This is the internal semiotic domain: the rules, patterns, and the gameplay experience from which haiku originally emerged. These rules constitute what Gee calls an ‘internal design grammar.’ Gee elaborates, “By an internal design grammar, I mean the principles and patterns in terms of which one can recognize what is and what is not acceptable or typical content in a semiotic domain” (Gee 30).

The internal semiotic domain, the content of haiku, provides a framework for the core mechanics. Together with story, aesthetics, and theme, the core mechanics create gameplay poetics—the experience of the game. In his essay *The Aesthetic Coordinates of Haiku: A Ginko Towards Mount Fuji*, Dietmar Tauchner provides rules and attributes for haiku. For rules, he presents *shibumi*, *kireji*, and *atarashimi*. *Yugen* and *aware*, meanwhile, are attributes that relate to the experiential correspondence between reader and text.

Shibumi is brevity—inhaling and pronouncing a poem before the exhale. Traditionally, haiku are written using the 5-7-5 syllable formula, and include a *kigo*, season word, as the keystone. Haiku also feature a surprise, or *kireji*, a cutting word that creates a pause or juxtaposition within the poem. This break in the poem can be either a line break, a punctuation mark that signals a moment of awareness, such as an em-dash or appositional phrase. Or it can simply be the juxtaposition of two surprising images or

ideas, as in George Swede's poem, "stars crickets" (Tauchner 66). *Atarashimi* is about how the poet introduces novelty into the poem, either through new subject matter, an unlikely subject for a haiku, or by providing a new view on old subject matter. Basho's frog poem (quoted above) provides an example of *atarashimi*.

For classical poets, the frog represents spring, and can be found in pellucid waters amidst yellow kerria flowers. Basho upends the beauty of the classical image with a splashing surprise. The original poem became the theme for a 1686 poetry writing competition wherein it was reimagined by poets. Basho advocated for this dialogue of perpetual reinvention. He writes, "Don't follow in the footsteps of the old poets; seek what they sought" (Hass 233). The attributes of *shibumi*, *kireji*, and *atarashimi* provide the space-time dimension of haiku and create what Tauchner calls "three-dimensional haiku" that we experience actively (68).

The final two-attributes, *yugen* and *aware*, dwell in stillness and appreciation. *Yugen* refers to the ineffable and mysterious qualities that make a poem. This attribute partially evokes *wabi-sabi*, a Japanese concept that entails solitude in nature, a hint of sadness, and finding the soul in the rusticated, weathered, and imperfect world. Basho writes, "*Sabi* is the color of the poem" (Hass 254). Taken together, these attributes can create *aware*, a sense of timelessness and deep appreciation of nature. It is up to the reader to decide the qualities of *yugen* and *aware* in a haiku poem, a process that dwells within the mind of the reader and their generative correspondence with the poet. Entering the minimal space of a haiku, the reader can fill in their memory and imagination to take part in the poem's completion. This correspondence makes the thought space of the poem—suggestive and compact—anything but remote from the reader's personal experience.

In terms that children can understand, haiku poet Patricia Donegan created seven keys to writing haiku: form, image, season, here and now, feeling, surprise, and compassion (Donegan 7).

Figure 10: Mind map sketch of Donegan's seven keys to haiku writing, for children.

Shibumi and *kireji* provide the basics of form and the here & now, a three-line form with a 5-7-5 syllabic structure, which can be pronounced in a single breath. The brief poem places a seasonal word as its keystone and is broken into two parts through the cutting word. The *kireji* also helps create a surprise, another key to writing haiku poetry. These rules suggest that a haiku poem could begin by choosing a season word. This completes one-third of the poem. Then the poet needs to figure out the other two lines, and where to place the break to create a surprise. This surprise can compel the reader to correspond with the text—and even wish to interact with it. Compassion can be evoked through the animal's needs and immersion in the fragile natural worlds of the game. Compassion can also be part of an advanced game mechanic: after completing the travel journal, the player writes a linked verse poem with the animals, using their unique vocabularies and perspectives.

External Semiotic Domain: The Social Context, Collective and Individual

The external semiotic domain entails convivial practice, standards and norms, and guiding principles, for the collective and the individual. Our project brings to the forefront the relevant cultural contexts from which haiku as play verse flourished. Basho's guiding principles informed his circle of poets and shaped haiku in ways that resonate today. Basho demonstrates the *haikai* spirit—how poets should approach poetry and make their way through the world.

By immersing themselves in the setting of Basho's world, literacy learners also discover Basho's worldview. His ideas teach values concerned with poetry as a secondary nature in his time, and which remain relevant to teaching sustainability today.

I have mentioned that the game has environmental values. Given today's ecological crisis, I believe there's an ethical imperative to integrate sustainability values into all social settings where students do project-based learning—including the humanities, analog and digital. This belief ascribes to David Orr's prescient article 1991, "What is Education For". He claims in this article that "all education is environmental education" (Orr). Orr advocates for an explicit connection between subject matter inquiry and environmental thinking across the curricula; by not making these connections, educators imply that human systems and other natural systems are apart rather than implicated in each other. He advocates for the ancient Greek view of education as *paideia*, where the ultimate goal is the development of an identity. "Subject matter is simply the tool. Much as one would use a hammer and chisel to carve a block of marble, one uses ideas and knowledge to forge one's own personhood," Orr writes. "For the most part we labor under a confusion[...] that the goal of education is to stuff all kinds of facts, techniques, methods, and information into the student's mind, regardless of how and with what effect it will be used" (Orr). The strength of video games, Gee argues, is in the type of identity-creating potential they hold. But as in any other creative medium, it's up to the learning experience designer to inculcate sustainability values. Through the keys of haiku, sustainability values appear.

Future Work

We are developing the video game from a set of concept sketches, diverse in style and divergent in content, so that we can converge on a prototype. Inevitably, as we move from the 'why' and 'what if' to the reality of 'how,' many of the 'blue sky' ideas will fall away or reduce. At the same time, we will make sure the 'slow boil' research remains integrated into the story and game. Convergent work includes validating the concepts for the storyboards for the introductory *haibun* story and the mechanics for one interactive episode. Here, the player collects seasonal words at a pond to create a haiku

about spring, completing the story, protecting nature, and turning the page. To prepare for a proof of concept, we will also need to create style frames, sprites, and digital assets for the *haibun* journal and the interactive haiku setting. The proof of concept is like art direction in other fields. The work gives direction for a specialized artist to work from. We intend to art direct an artist who knows Japanese culture well, and to find a cultural expert who can review our work. Then, we' ll use this blueprint and toolkit to work with a developer familiar with either Unity or HTML 5, both popular video game platforms that can be played from a website. This collaboration would yield a playable prototype to be used by children, ages ten and up, to test and refine a mechanic-driven design that is easy to pick-up and learn.

One challenge we will need to overcome: the aesthetic-usability effect. People perceive beautiful interfaces to work better than less beautiful interfaces that have the same functions. For that reason, beautiful things actually do work better. When people interact with an aesthetically pleasing interface, they' re more relaxed and better able to see the big picture, including how to operate an interface. Complicated interfaces induce confusion and frustration, narrowing the user' s scope of attention. They' re more likely to miss the big picture and give up quickly. Beyond this, children are less interpretative than adults when viewing concepts and prototypes. This means we' ll need a prototype that' s more refined and closer to the real thing than other prototypes might be, to account for the aesthetic-usability effect and the age of our youngest users.

Conclusion

Gee highlights three benefits of active engagement with a new domain of knowledge:

1. We learn to experience (see, feel, and operate on) the world in new ways.
2. Since semiotic domains usually are shared by groups of people who carry them on as distinctive social practices, we gain the potential to join this social group[...].
3. We gain resources that prepare us for future learning and problem solving in the domain and, perhaps, more important, in related domains (23).

We intend to create an experience that meets these learning needs, by helping students experience Basho' s world through the video game. Players may develop a sense of a writerly self. With a growing awareness for Japan' s culture of the four seasons and our mindful connection to nature, the student may gain empathy: *Basho & Friends* encourages players to practice an ethical approach to living more sustainably. At the same time, it introduces players to the social settings that cultivated a new literacy in its time, at once timeless and everchanging today.

With a web platform that supports continued learning, students may also develop more wisdom and discernment into the type of literacy that goes into haiku writing and their own writing disposition. With this knowledge, they may also begin to intuit more connections to the world around them, and how we can remake our world by writing about it.

Works Cited

Addiss, Stephen. *The Art of Haiku: It's History through Poems and Paintings by Japanese Masters*. Shambala Publications, 2012.

Barnhill, David Landis. *Basho's Haiku: Selected Poems of Matsuo Basho*. 1st ed., State University of New York Press, 2004.

Berger, Warren. *A More Beautiful Question: The Power of Inquiry to Spark Breakthrough Ideas*. Bloomsbury USA, 2014.

Brathwaite, Brenda, and Ian Schreiber. *Challenges for Game Designers*. 1st ed., CreateSpace Independent Publishing Platform, 2008.

Buxton, Bill. *Sketching User Experiences: Getting the Design Right and the Right Design*. Focal Press, 2007.

Donegan, Patricia. *Write Your Own Haiku for Kids: Write Poetry in the Japanese Tradition - Easy Step-by-Step Instructions to Compose Simple Poems*. Tuttle Publishing, 2018.

Gee, James Paul. *What Video Games Have to Teach Us about Learning and Literacy*. Palgrave Macmillan, 2005.

Gibbons, Sarah. "Design Thinking 101." *Nielsen Norman Group*, 2016, Accessed March 16, 2021, www.nngroup.com/articles/design-thinking/.

Hass, Robert. *The Essential Haiku: Versions of Bashō, Buson and Issa*. Ecco Press, 1994.

Hirshfield, Jane. *The Heart of Haiku*. Kindle Single Edition, 2011.

Holmes, Kat. *Mismatch: How Inclusion Shapes Design*. The MIT Press, 2018.

Knapp, Jake, et al. *Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days*. Simon & Schuster, 2016.

Kohl, Herbert. “On Not-Learning.” *The Threepenny Review*, vol. 50, no. Summer, 1992, pp. 12–20.

Lynch, Robert, and Patrick Oakford. “Economic Benefits of Closing Educational Achievement Gaps.” *Center for American Progress - Closing the Education Gap*, Center for American Progress, 2015, interactives.americanprogress.org/projects/2015/achievement-gap/.

“Chapter 7: What Is Design Thinking and What Does It Have to Do with Equity?” *Introduction to Design Equity*, by Kristine F. Miller, University of Minnesota Libraries Publishing, 2018, p. 47.

Norman, Donald A. *Emotional Design: Why We Love (or Hate) Everyday Things*. Basic Books, 2007.

Orr, David. “What is Education For?” *The Learning Revolution*, 1991. www.context.org/iclib/ic27/orr/.

Reichhold, Jane. *Basho: The Complete Haiku*. New York City, Kodansha America, 2008.

Shirane, Haruo. *Japan and the Culture of the Four Seasons: Nature, Literature, and the Arts*. Columbia University Press, 2012.

Shirane, Haruo. *Traces of Dreams: Landscape, Cultural Memory and the Poetry*. Stanford University Press, 1998.

Spencer, John. *Vintage Innovation: Leveraging Retro Tools and Classic Ideas to Design Deeper Learning Experiences*. Blend Education, 2020.

Takehana, Lisa. “Re: Basho’ s Poetry Game.” Received by Joshua Korenblat, 28 May 2020.

Tauchner, Dietmar. *The Aesthetic Co-Ordinates of Haiku: A Ginko Towards Mount Fuji*. Translated by Alexandra Bainschab, vol. 36, no. 3, Autumn 2013, pp. 64–70. Haiku Society of America, www.hsa-haiku.org/frogpond/backissues/36-3-Frogpond-Autumn-2013.pdf.

Wodtke, Christina. “A Unified Theory for Designing Just About Anything.” Medium, 20 Dec. 2017, [cwodtke.medium.com/a-unified-theory-for-designing-just-about-anything-b87f1e4f050b](https://medium.com/a-unified-theory-for-designing-just-about-anything-b87f1e4f050b).

Footnotes

1. To learn more about the educational achievement gap in the United States, refer to the “Economic Benefits of Closing the Educational Achievement Gap,” a 2014 report by the Center for American Progress (CAP): www.americanprogress.org/issues/race/reports/2014/11/10/100577/the-economic-benefits-of-closing-educational-achievement-gaps/. CAP is a progressive U.S. think tank. It presents a research-based perspective about what caused the gap and how to close it. This report is also presented as part of an interactive project that I worked on with Graphicacy, a Washington, DC data design firm, where I’ m an art director: interactives.americanprogress.org/projects/2015/achievement-gap/. Together with my firsthand experience, the data from this project compelled me to think about what roles designers can play in proposing ideas to bridge these structural and systemic literacy gaps. [↗](#)

2. Anime is a genre of Japanese animated television shows. Manga, in the form of comics or graphic novels, share a similar art style and many of the same themes as anime. *Pokemon* is an example of this genre. [↗](#)

3.
Our team includes educators, designers, and an engineer: Julie Finton, a former English as Second Language (ESL) instructor at the Pratt Institute, in New York City; Anurati Srivastva, a social and emotional learning game designer at the UNESCO Mahatma Gandhi Institute of Educational Programs, Delhi, India; and Sweta Pendyala, a research manager working at the State University of New York Polytechnic Institute.

As I am not a video game designer, I’ ve also consulted with numerous experts, including Jens Peter de Pedro, a co-founder of Toca Boca, game designer and children’ s book author Russell Ginns, User Experience Design thought leader Jared Spool, and Google Doodle designer Lisa Takehana. With her team at Google Doodle, Takehana worked on a Google Doodle project that launched in 2020, *Mbira*, about the national instrument of Zimbabwe: www.google.com/doodles/celebrating-mbira.

This project provides an exemplar of an integrated story and game for cultural appreciation. The game can serve as precursor for future guided learning in classroom settings. In an email, Takehana explained the design pillars for the project to me: “For the Mbira Doodle, we had two pillars: 1. The player should be able to experience

playing a digital version of a mbira. 2. Showcase the human side of the mbira culture and community.” [↵](#)

4. For inclusive design, consider the following examples: the OXO good grip vegetable peeler, designed for those with arthritis, benefits many other people who find the swiveling, ergonomic grips easier and more pleasurable to use than other peelers. Curb cuts, the gently sloping transition between sidewalk and street, were designed for those in wheelchairs. But everyone tacitly appreciates the accommodation, from mothers pushing baby strollers to distracted people texting. Or consider closed captioning. While this service benefits the deaf community, it also benefits others who might appreciate the service at the right time and place, such as people watching a televised sporting event in a noisy environment. [↵](#)

5. To read about these game design criteria, refer to: cwodtke.medium.com/a-unified-theory-for-designing-just-about-anything-b87f1e4f050b. These criteria can work as a diagnostic check for any interactive project—including video games or digital humanities projects—that intend to be memorable, intuitive, and rewarding experiences for their users or readers. [↵](#)

6. For complex design projects, a series of sprints often work better than one grand plan, which is why some of the leading software and product design processes are called Agile and Scrum (named after rugby scrums, which move the ‘ball’ forward to the goal in close-knit, collaborative sprints). [↵](#)

7. For example, the University of Capetown, South Africa, now has a Design Thinking degree program, similar to the prototype program at Stanford, the [d.school](#) (d, for design). [↵](#)