

Learning to see the familiar: Technological assemblages in a higher education (non)classroom setting

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Abstract

If an objective of public higher education is to engage with a diversity of communities, then coursework should be less insulated within classrooms. This work describes and analyzes a university course design that supports undergraduate students to experience learning as relational and transformational via Site Visits within various communities. We focus on “technological assemblages” as a way to understand students’ reorientation to the process and purpose of learning (and teaching). We analyze experiences within the course as moments of *disorientation, reassembly and stabilization* in which students use their mobile devices, bodies and interactions-in-place to understand familiar locations as socially and historically contingent sites of learning (and teaching). We argue that this instructional model does important work of putting students at the nexus of building relationships between the university and other community settings around the city.

Introduction

If an objective of public higher education is to engage with a diversity of communities, then coursework should be less insulated within classrooms. Digital technologies mobilize and stabilize teaching and learning relations between classroom and nonclassroom communities (eg, Ito *et al.*, 2013). In this paper, we describe and analyze a *public-facing* instructional model we co-designed and co-instructed for 2 years, a course called, “Learning Across and Within Settings,” for a new undergraduate major, Education, Communities and Organizations (ECO). Learning Across and Within Settings (LAWS) is a required course for all undergraduates majoring in ECO. Students are pursuing careers in education, broadly defined. Some will teach in classrooms, while others are considering careers in social work, psychology, public health and youth development. When we first taught the course 3 years ago, 50 students were enrolled. Currently, enrollment is up to 100 students. Our course, therefore, invites hundreds of Education students

Practitioner Notes

What is already known about this topic

- Learning is relational and transformational.
- Learning-on-the-move is a genre of teaching and learning that holds in relation bodies and histories-in-place via mobile and digital technologies.
- Understanding heterogeneity of teaching and learning practices requires close observations and systematic analyses of formal and informal educational contexts.

What this paper adds

- Theoretical perspectives related to “post-digital” instructional design.
- An innovative instructional design for undergraduate students to develop new relationships with their (learning) communities.
- A digitally mediated analysis of student learning where bodies are held in relation to histories-in-place through “technological assemblages.”

Implications for practice or policy

- Insights for placing students at the nexus of community-institutional relations
- Design principles for incorporating mobile learning in higher education contexts
- Opportunities to revitalize historical narratives and community partnerships through “course content.”

each year to reimagine the formal/informal paradigm through digitally enhanced community engagement.

Originally conceived as a survey course covering extant learning theory, LAWS activities have changed to more effectively shift students’ notions of “what counts” as learning. Using the affordances of digital media and technologies, the course supports students to reimagine learning from an individual, mental accomplishment seated in a desk to an embodied social practice within community spaces. Findings suggest that a component of the instructional model, *Site Visits*, support students to differently *enact* learning and teaching processes by building new relationships with their peers and with their community spaces (Radinsky *et al.*, 2001). Site Visits asked students to become “observant participants” (Erickson, 1996) in various campus and community settings (eg, museums, zoos, libraries, cultural heritage centers) to grapple with the widely varying structures of nonclassroom learning and teaching.

This paper focuses on a culminating course activity, toward the end of the 10-week quarter, where students “brought back” their experiences from across the city to (re)mediate their relationships with their/our urban campus community. Using their mobile devices, students documented aspects of their learning environment. The collection of digital artifacts, personal reflections and conversations resulted in a technological assemblage (Duarte, 2016), or “the labor through which knowledge, resources, materials and histories become aligned and contested” (McFarlane, 2011, p. 1). Our two research questions are:

- How do Site Visits support students to achieve course learning objectives (ie, learning as a social practice rather than an individual accomplishment)?
- What are the emergent properties of the instructional design, especially related to learning with technology, that were important for achieving the course objectives?

Through an analysis of technological assemblages before, during and after a designed campus walk, we offer evidence of students' shifting understanding of what counts as learning and teaching. We argue that these shifts are essential for longer term projects that disrupt power structures inherent in the classroom-as-container model.

Framing

Learning as relational, transformational

Course learning objectives were operationalized through Site Visits—students observing how learning and teaching *take place* in nonclassroom spaces—because the most powerful theories of learning were derived from looking at and understanding learning as it happens in all of the other contexts of our daily lives: gardening and cooking in homes (González *et al.*, 2009), apprenticesing in a trade (Lave & Wenger, 1991), reading stories with parents and siblings (Heath, 1983), playing video games at the library (Hollett & Ehret, 2017), returning to museum exhibits to answer questions about dinosaurs (Crowley & Jacobs, 2002). These sociocultural theories frame learning as relational (eg, Bang, 2015; Bang, Medin, & Atran, 2007; Bang & Vossoughi, 2016); our learning process depends on being in relation with others, with materials and with environments (Ellsworth, 2005). Because relationships are dependent on people and the social milieu, learning is, by definition, always cultural (Gutiérrez, 2002; Lee, 2003), always embodied (eg, Lindgren & Johnson-Glenberg, 2013) and always powered or political (eg, Phillip, 2011). In this framework, value-free, value-neutral or apolitical versions of teaching and learning are nonexistent. When a person learns something, it is as much a social transformation (Jurow & Shea, 2015; Taylor, 2007) as it is an individual shift. This stance is uniquely important in the higher education context in which market-led notions of student learning and "achievement" increasingly define "high-quality" or "effective" instruction (Murphy & Brown, 2012).

Language in the LAWS syllabus centers learning as a lifelong, life-wide and life-deep phenomenon (Bransford, Brown, & Cocking, 1999). Still, we underscore that students should strive for their learning *in this course* to be transformational, to change their relationship with each other and with the larger university and urban community. To do so, we challenge the colonial classroom structure of learning (eg, Cornelius & Herrenkohl, 2004) by replacing learners within spaces they typically move through, by being in relation to each other and their relative expertise (Stevens *et al.*, 2016), and by inviting in the complexity of daily life rather than distilling it from instruction.

We include the university's public campus as part of the larger city community. While we recognize that student campus life is often considered separate from the greater urban context (eg, Rudolph, 1962; Veysey, 1965), we encourage undergraduates to examine their perceptions of this divide through scaffolded interpretations of the social, political and historical influences on learning environments, especially within and beyond the spatial boundaries of the university (Berube, 1978; Diner, 2017; Erickson, 2016; Goodall, 1970; Mattingly *et al.*, 2004).

As networked mobile devices are increasingly used to layer meaning upon traditional methods of place learning and place knowing (eg, visiting, conversing, sensing), we implicitly participate in and contribute to the creation of geographic imaginaries of cities and communities (Gregory, 1995; Said, 1979), including the urban university campus. A geographic imaginary is an "othered" space that has been dehistoricized and reconstituted through imagery, texts and false narratives (Gregory, 1995). Geographic imaginaries are culturally constructed ideas about place which inform cultural identity. Site Visits and other coursework leverage location-aware technologies to contextualize and engage learners in understanding how to identify, analyze and reflect on collectively held ideas about places and the practices that are taken up in them. This multimodal

approach opens up possibilities for sharing social interpretations across a range of sense-making experiences.

Technological assemblages

We position this undergraduate course design in a “post-digital” (Pepperell & Punt, 2000) world, awash in screens, apps and pixels where students are enmeshed in morphing assemblages of technologies, environments and identities (Landström, 2007). From a post-digital perspective, technology is inseparable from the human experience where technological assemblages (Duarte, 2016) are co-constructed and stabilize student meaning-making. Our Site Visits assume learner autonomy in which classroom hierarchies (ie, teacher-student) are displaced through digital media (Taylor, Silvis, & Bell, 2018) and where relationships within and across contexts are dynamic.

In connecting the post-digital perspective with the interdisciplinary meaning-making processes of multimodal engagement, we offer students ways to make social, emotional, physical and cognitive connections with the histories of their learning community—all of which are interrelated (Sakr *et al.*, 2016). This is completed across and within a cascade of technologies and environments (Landström, 2007; Pepperell & Punt, 2000). In so doing, we do not weigh any mode of technological assemblage as having greater worth than another (Duarte, 2016; Jewitt, 2013) because each is a communicative representation of the personally embodied connections students had with the history, the place and their own emotional investment made manifest through participation in the Site Visits activities (Sakr *et al.*, 2016). Still, we do recognize the differently powered nature of each students’ interactions within the settings they encounter; each student’s emotional connection to stories-in-place exist in a larger frame of class-based and racial oppression or privilege they have lived.

To better understand emergent post-digital assemblages, we revisit aspects of Haraway’s “Cyborg Manifesto” (1985/1991) in which she dismantles the interpretation of human/technology hybridity. Haraway equates human-machine mashups as a kind of “liberation” that “rests on the construction of the consciousness, the imaginative apprehension, of oppression, and so of possibility” (p. 118). We hold on to Haraway’s vision of fluid transcendence of sociotechnical and material boundaries as we untangle embodied and emergent post-digital learning processes. Supported by assemblages of digital devices, bodies, and places, Site Visits serve as a bridging construct, a real-life experience to enact the interconnectedness of experience through time and place. In this paper, we present three moments from Site Visits in which technological assemblages made visible students’ emerging understandings of learning as a transformational process: (1) *disorienting experiences* for referencing imaginaries; (2) *reassembling the “everyday”* with new perspectives; and (3) *stabilizing new relationships*.

Methods & procedures

Course design

In light of the learning objectives, it would not only be disingenuous but antithetical to teach this course via lecture seated in a classroom. Building upon courses, we took in our own academic histories, concepts from decades of learning sciences research, and design principles from studies of learning on-the-move (Taylor, 2017; Taylor & Hall, 2013), we developed an instructional model that relied on two integral parts: “Lab Days” and “Site Visits.” During Lab Days, students synthesized ideas from the readings in small and whole group activities. As shown in the Lab Day photo (Figure 1a), these days were also for collaborative activities, troubleshooting technical



Figure 1: (a) Lab Day: students work together to develop a model of a “community of practice;” (b) Site Visit: students on their way to a Site Visit in the U-District, the local neighborhood of the university
 [Colour figure can be viewed at wileyonlinelibrary.com]

questions, reflecting on what was collected during Site Visits and sharing our plans for future Site Visits.

Site Visits took place in public settings where undergraduate students—at times led by graduate students—participated in and observed sociocultural learning. Students were responsible for contacting settings (we provided a template email) and staying in communication with the various partner sites throughout the quarter. During Site Visits, students connected ideas from course readings to visible practices enacted around the community. Sometimes students reenacted historical practices that were no longer visible but essential for making the place what it has become today (more on this in our analysis). They used their mobile devices to document interesting moments (eg, Radinsky *et al.*, 2005) and uploaded these artifacts to our course LMS.

Groups have watched people learn and play “Go” at the Seattle Go Center. They have observed teaching interactions play out between zookeepers and young people at the city zoo. One group watched a patron receive a tutorial on his malfunctioning Macbook at the Apple Genius Bar. Several groups walked the banks of the Duwamish River to imagine practices that used to take place in communities living on the banks. Groups have traveled more than 15 miles, round trip, during class time, from their campus neighborhood, and many hovered around various studios and museums close to campus. To date, students have visited more than 30 locations across Seattle to observe and participate in learning and teaching outside the classroom (Figure 2).

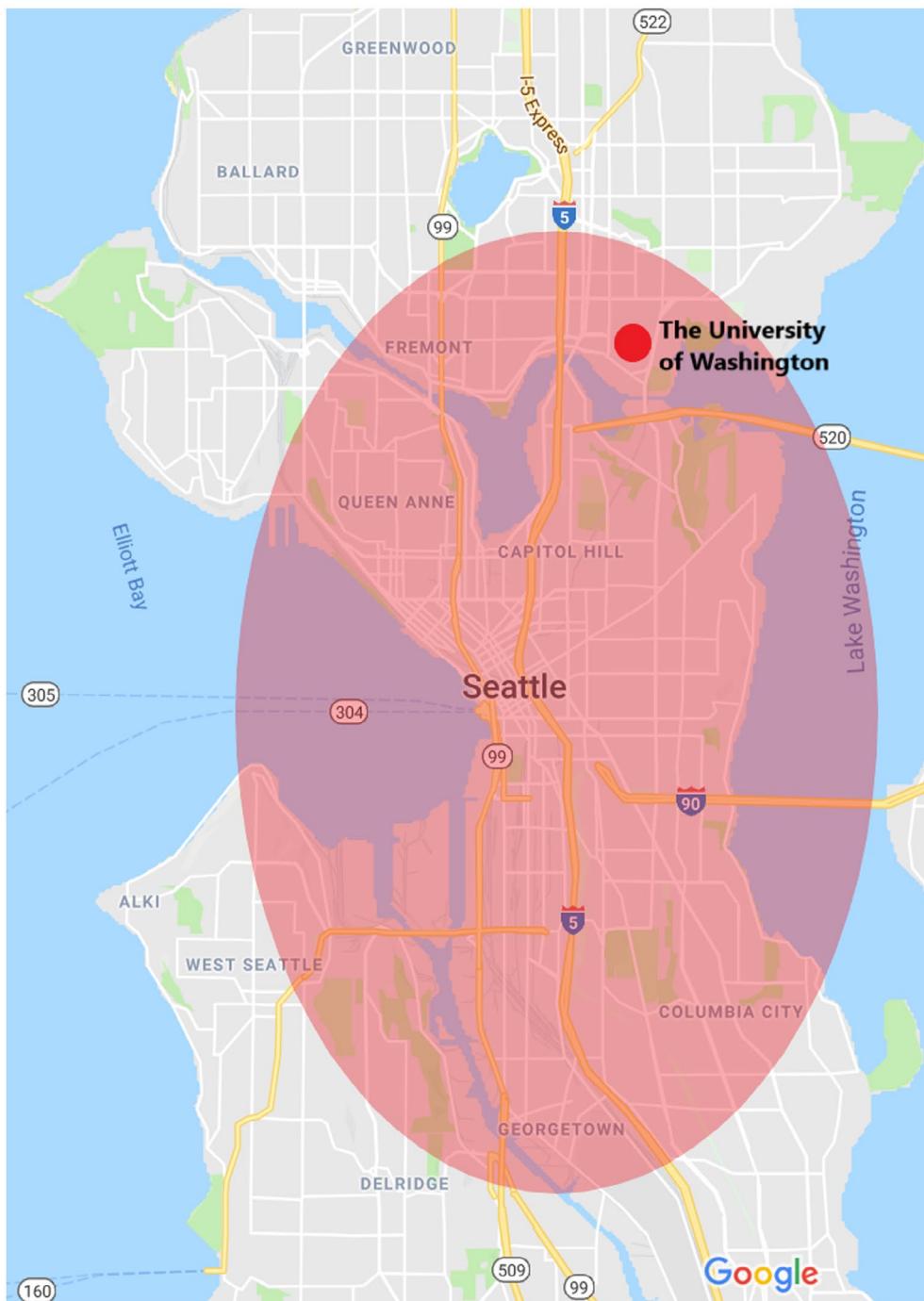


Figure 2: A map of the Seattle isthmus, with a red dot noting the university and a transparent red oval to illustrate how far students have traveled for Site Visits. Exact locations are not marked to maintain the anonymity of our community partners
[Colour figure can be viewed at wileyonlinelibrary.com]

An expectation of Site Visits is that students reflect on the experience by responding to a set of prompts from the instructor that connect to the week's readings. Each group builds upon one of these reflections over the quarter to do a (re)Presentation of a Site Visit, via performance, slide deck, podcast, etc to share with the class. (Re)presentations support groups to highlight one or two experiences from a Site Visit that brought home ideas from the readings. In one example, a group created a website connecting their visit to The Duwamish Longhouse and Cultural Center to Funds of Knowledge from González *et al.* (2009). They wrote:

Whether consciously or unconsciously, we all tapped into our funds of knowledge about the Duwamish River. We took into account what we knew about the area, about the city, about the Duwamish people, and about the physical river itself. Some of us had never seen the river up close much less knew about its existence.... By accessing these funds, we made connections about our own cultural practices and the cultural practices of the Duwamish tribe.

With 100 students enrolled, we depend on many structural supports to maintain this instructional model. We randomly assigned students to small groups of 10 or fewer, called Site Visit Groups (SVGs). In three iterations, each SVG was assigned a Graduate Student Mentor (GSM). The GSMS enrolled in a methods course to learn more about data collection techniques, curricular design and analysis. Many GSMS also used this course as a refresher on learning theory, and they had the option of building out "themed" activities for their undergraduates.

Activity design

This paper focuses on the final Site Visit activity we call *UW Sites of Resistance*. Occurring in Week Nine of our 10-week course (after students completed their visits across the city), this activity is a digitally mediated walking tour of the university campus to further develop a practice of identifying political, often marginalized moments, as *also* sites of learning and development (eg, Kirshner, 2007). By situating the campus-community "boundary" as porous, our design sought to point out the (often) contested interests involved in community relationships across contexts—especially in an urban, public, higher education context where local stakeholders often leverage their resources to accomplish market-driven objectives (eg, Amazon, Microsoft, Google, Bill and Melinda Gates). To do this, students took up different forms of participation where they became engaged with the materials and metaphysical histories of their broader campus learning environment. Using information from a mobile app, a student published zine (*People's History of the University of Washington*, 2013), a university newspaper article (Aina, 2017), extant learning sciences concepts (eg, learning on the move; Taylor, 2018) and peer collaboration, students moved through different campus locations in small groups to interact with sites where various forms of resistance have occurred.

Because of the constraints of classroom learning in higher education (ie, large numbers of students, 2 hours of class time, a sprawling campus), part of our design included "distributed scaffolding" (Land & Zimmerman, 2015) that called students' attention to the places they pass by and through every day. Before leaving the classroom, students easily listed off campus buildings and main thoroughfares, like the Student Union Building and the Quad, in rapid succession as the instructor compiled and projected the list. None of the locations students named, however, were designated Sites of Resistance. SVGs then moved between selected sites using an open source geographic information system known as Siftr. The mobile application displayed instructor-selected locations on campus (Figure 3a) along with a brief historical description of an act of resistance (from the newspaper article) which took place at each site (Figure 3b). The digital presentation of historical events supplied students with narratives that were no longer visible. Alongside site descriptions, a unique task invited students to interact with the spaces (eg, Sakr, *et al.*, 2016).

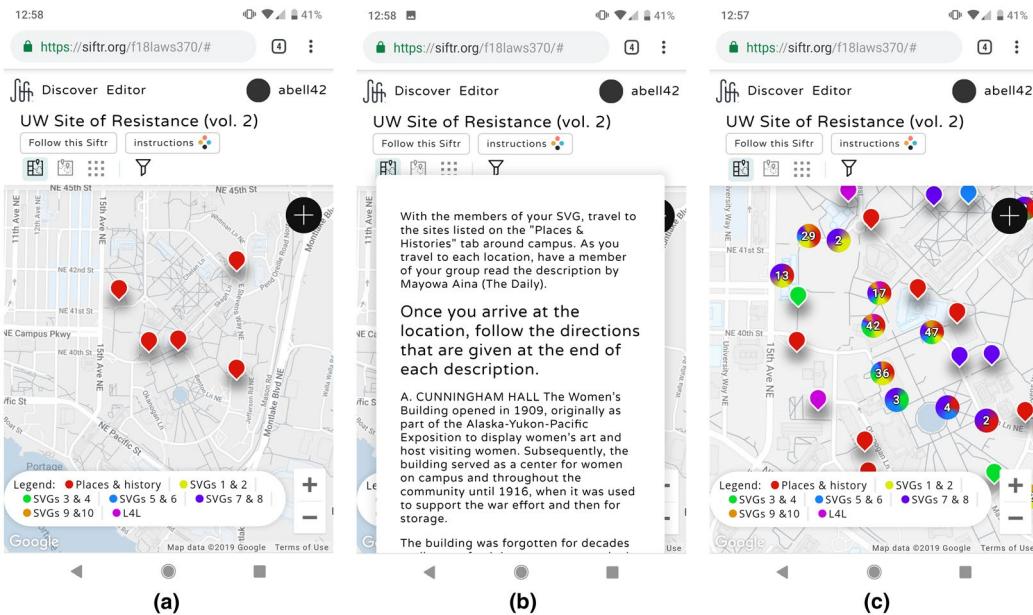


Figure 3: (a) Mobile screenshot indexing five campus Sites of Resistance from Siftr added by the instructor. (b) Mobile screenshot of site history and activity instructions from Siftr added by the instructor. (c) Mobile screenshot indexing student uploads of photos and captions across the campus Sites of Resistance
 [Colour figure can be viewed at wileyonlinelibrary.com]

Students were asked to document a moment of their interaction by taking a photograph, geolocating themselves in the app, posting their photo on the map and providing a reflective description (Figure 3c). The sites they visited included:

- the university administrative offices where the Black Student Union won a sit-in demonstration leading to increased minority student representation;
- the Women Studies building which was recovered after years of lying dormant as a storage facility;
- a campus plaza where a protest prevented Vietnam War troop recruitment;
- a gathering place for Indigenous Peoples that took over 30 years to construct since its initial inception;
- and a sculpture entitled "Blocked Out," the *only* campus monument to diversity.

Data collection

We used three video recording devices to capture elements of this activity design. One camera was mounted on a tripod in the classroom and recorded both student preparation for the Site Visits and the debrief of the activities once everyone had returned from the campus locations. The other two recording devices were small portable field cameras carried in-hand by two researchers who followed different SVGs, chosen at random. Admittedly, this arrangement did not capture all of the students' activities because there were over 90 students in 10 groups walking around campus. Data also include over 300 student-uploaded photos with reflective captions related to their interactions in the place, along with the video collected by two researchers on

the campus walk. After the class activity, students posted reflections on the course LMS; we also used these posts in our analytic process.

Analysis

Data analysis began with viewing and content logging (Jordan & Henderson, 1995) both the classroom video and the field camera videos. We reviewed content logs and identified moments, or video chunks (*ibid.*), where students had to work through moments of discrepancies during which their preconceptions contacted some other, external reality during a Site Visit. We began thinking of these moments as “disequilibrium” and then followed them through to some resolution or holding pattern. We noted the cultural, social and spatial dimensions (Jackson, 2011) during these moments of disequilibrium. We assembled all of the data sources we had for those collections of moments. Geolocated photos and annotations, eg, were linked to video chunks of student experience to reconstruct the sequence of events. Finally, select student reflections, posted on the course learning management system, were reviewed to triangulate analysts’ interpretations. We conducted a multimodal analysis (Jewitt, 2013) of all corresponding digital artifacts. We created high-level interpretations of the action and then refined these into categories relating to our research questions.

Results

Findings reify the importance of providing students opportunities to embody concepts from course readings with their/our community, and to offer different modes of interaction that redistribute subjective perspectives into a broader assemblage of truth (Haraway, 1988). Site Visits—exemplified here by our Sites of Resistance activity—invited students to co-construct technological assemblages where moving bodies and histories-in-place were held in relation via digital documentation practices. Using their mobile devices, students sustained these new relations and, by and large, recognized these relations as something “new,” we argue, transformative. Students did not merely learn *about* concepts like connected civics (Ito *et al.*, 2015) and learning on-the-move (Taylor & Hall, 2013). They learned through being in new relations with a familiar place—embodying a connection to previous activist communities on campus.

Disorienting experiences

Re-evaluating the mundane via new forms of participation is often disorienting. Students were invited to see a familiar place as a site of resistance—a place constructed by the social practices of past students acting upon their deep knowledge of an issue (Curnow, 2014). Reading text in the mobile app was the first invitation for students to reconsider preexisting ideas of a location. For example, when students visited Loew Hall, the College of Engineering building, a prompt on the app supplied a description from a university newspaper article which read:

In 1969, Students for a Democratic Society were leading the anti-Vietnam War protests around campus, particularly targeting recruiters. During one of the protests, as thousands of students approached Loew Hall to confront recruiters from the Navy, a pickup truck full of bee hives pulled up. Someone in a beekeeper suit began tipping the hives over and the bees began stinging the packed crowd of protesters. Despite this, students successfully took over and held Loew Hall, preventing any recruiting that day. (Aina, 2017)

Bodies were essential in conjuring a spatial imaginary. Standing on the very plaza where protesters once stood and were attacked, some students read the description aloud from their screens to their SVGs while others read silently. Many students looked around the space where they stood as if they could see the historical moments happening around them. As seen in Figure 4, one student uploaded a photo from a hidden vantage point in front of the building where Navy

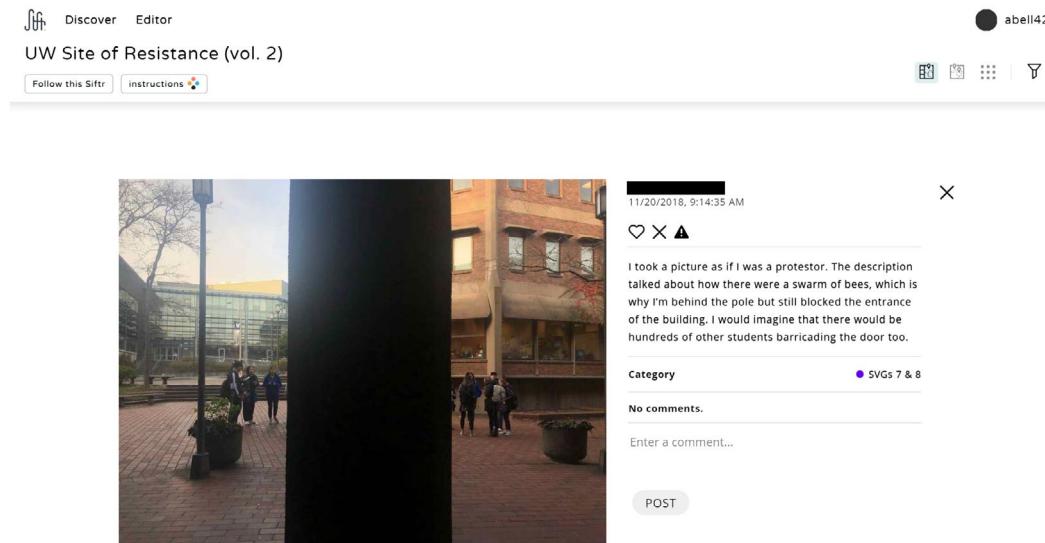


Figure 4: Theresa's technological assemblage from Siftr (Figures 4 and 5 are screenshots from the browser interface of Siftr, rather than the mobile application (as seen in Figure 3). These were used in order to capture all elements of the students' posts). Behind a pillar at the entrance of Loew Hall, Theresa looked toward the plaza where a Vietnam, anti-military recruitment protest occurred. Next to this, her reflective caption (right) explains what she imagines occurred here nearly five decades ago
 [Colour figure can be viewed at wileyonlinelibrary.com]

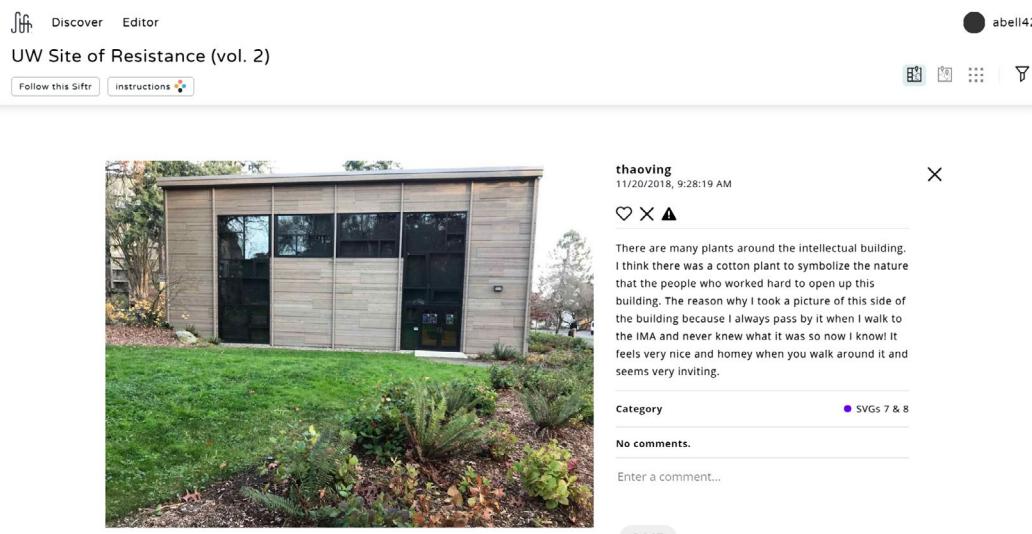


Figure 5: Part of Ubon's technological assemblage from Siftr. The Intellectual House is shown (left) alongside Ubon's descriptive reflection (right) after she walked around the site and interacted with the natural environment and materials surrounding the building
 [Colour figure can be viewed at wileyonlinelibrary.com]

recruitment occurred. In her reflective caption Theresa (names are pseudonyms) “imagines [she] was a protestor” and explains that the “swarm of bees” caused her to stand “behind the pole” but still “block[ing] the entrance of the building” while “hundreds of other students barricad[ed] the door.”

Theresa worked through a disorienting experience (English & Irving, 2012) about a site of struggle from her school’s history. In her actions—and her subsequent technological assemblage—we see how she positioned herself, literally, but also socially and emotionally: perhaps out of self-preservation of being surrounded by a swarm of bees, Theresa uses the environment to protect herself and to still hold ground at the site of the protest. The photograph throws the viewer into a state of disorientation, as well. In what other context would she stand behind the building’s column, separated, hidden from her classmates? By actually standing at the site of the protest (rather than simply reading about it or taking a photo from across the street), Theresa put herself in relation to the people, the environment and the materiality of Loew Hall to make sense of a past act of resistance, shrouded by time.

The “outcome” of student participation in this task is a technological assemblage in which student-to-student talk, bodies-in-place, histories and geolocated documentation “become aligned and contested” (McFarlane, 2011). This assemblage acts as a window into student meaning-making as they developed a new relationship with a terrifying moment, never considered as part of their school’s history, to make sense of ideas from our course readings. By literally standing on the same ground as student protestors before them, reading their story, and re-enacting the historical (yet cloaked) moment, these undergraduates joined a temporally distributed, location-specific, student network of *student* activists (eg, Williamson, 2008).

Reassembling the “everyday” with new perspectives

The concept of the “everyday” surfaced for students in other parts of the activity. Some of the Sites of Resistance were in places that students passed by on their daily rounds: going to class, walking home to their dorm room or heading to the gym. While walking outside the Intellectual House—a building to make space for Indigenous communities on campus (and modeled after a Duwamish Longhouse)—a young woman named Ubon told a researcher, “I always pass by it. I didn’t even know what it was.” After the researcher asked what she photographed to upload to Siftr, the student responded, “I took a picture of this side [of the building] because it’s the side that I pass by the most, and I don’t really notice the other side... I always thought this was just some other building, but now I’ve learned more about it.” In her annotation of the photo she uploaded to the mobile app, Ubon wrote:

There are many plants around the intellectual building (sic). I think there was a cotton plant to symbolize the nature [of] the people who worked hard to open up this building. The reason I took a picture of this side of the building is because I always pass by it when I walk to the IMA [gym] and never knew what it was so now I know! It feels very nice and homey when you walk around it and seems very inviting.

Ubon makes clear that she is “seeing” the Intellectual House in a new way, and her new knowledge about this Site of Resistance transforms her everyday rhythm by reorganizing her perception (eg, Goodwin, 2013). Instead of simply walking by one side of the Longhouse, Ubon recognizes new features of the place (ie, “It feels very nice and homey.”) because she walked around the building which led to an emergent viewpoint: places themselves have something to teach us, and by being in these places we include our whole selves in the historical narrative that is continuing to unfold.

New perspectives are cognitively and affectively disorienting; Ubon worked to make meaning of the Longhouse exterior, including the intentionality of the landscaping. She pushed through this disorientation by suggesting she saw “cotton plants” which “symbolize the nature [of] the people

who worked hard to open up this building." Despite this claim, there are no cotton plants around the Intellectual House, though Ubon took another photo capturing a plant that could be confused for cotton (she did not upload it). Ubon's self-positioning around the building, co-mediated by digital information accessible in her hand, highlights how learning-on-the move influenced how she saw a place as changing over time (eg, Taylor, 2018). Ubon saw the Duwamish Longhouse for the first time, not as "just some other building," but as a unique place on campus that connects to a broader sociohistorical context of Indigenous survivance, and the labor and sacrifice of others that made the building on this campus (the entirety of which sits on Indigenous land) possible. Her technological assemblage of the experience highlights a noticeable moment of transformation in her relationship with her learning community, and it recontextualizes her experience within a spatial imaginary: the former presence, now absence, of Duwamish people and their history and survivance on what is now a university campus.

We gained further insight into Ubon's disorientation and eventual stabilization when we considered a later, more in-depth reflection. This latter writing exercise helped us follow her, and other students, developing understandings of Site Visits across 8 weeks of the quarter. In her online discussion post, Ubon states: "I feel that in today's society we have all become numb to real life history and do not think about the impact of the situation until you're standing at the very site of where that specific history even happened at." Ubon described finding her footing within this new paradigm of her everyday and noted emotions she developed by being in a place of resistance; she was no longer "numb." Having discovered the seemingly solid ground of her commute as "honeycombed" (Limerick, 1988) with the violence of western history, Ubon reassembles a new perspective on her daily walk that reinvigorates lives past.

Stabilizing new relationships

After moments of disorientation and reassembly, new relationships stabilized. We found that technological assemblages stabilize relationships on a digital map to form a broader "objective" narrative sustained through each subjective viewpoint (Haraway, 1988); individual perspectives are tempered by the collective when photos and annotations are viewed all together. Within the assemblage, students' bodies are viewable in photos and their locations are visible on the map. Also critical masses, or densities of bodies are represented by multicolored circles on the map; the higher the number and more colors the circle contains, the more people have visited that spot and uploaded a photo from there (Figure 3c). Still, *all* of the sense-making means of the body in situ are not "felt" in the digital representation, so students reanimated these feelings in the post-activity discussion (Taylor & Hall, 2013).

Back in the lecture hall, an instructor-led prompt asked students to think about how learning differs in a classroom compared to embodying course concepts through historical narratives of campus activism. In relation to "Blocked Out," the only monument to diversity on campus (constructed in response to the unveiling of a statue of a white, university football coach), one student suggested that "it's more real and makes you care more because being at the place, you sought out information" about the sculpture. Another student signaled the importance of the embodied experience of the activity by stating, "You're able to use all five of your senses when you're there. You can touch things, you can see things from different angles. You can walk around... you can smell things if you want to." Using their senses, students' bodies, with all their capacities, mediated their relationships with core course concepts via materially instantiated histories at the sites of resistance. As these new relations developed through interaction, students stabilized connections to ephemera of the past that have had lasting impact on current lived experiences. Another student offered a similar interpretation regarding being in a place of historical relevance:

It is more confrontational in a way because being in the actual place, it makes you think more in depth about what went on. You can metaphorically be in the shoes of a person or people who were there. Whereas in a classroom or reading this from a textbook when you're in a class it is more of an isolated event or period of time because you're learning about it in a distant, removed context rather than actually making a connection with that location.

Within the context of “being in the actual place” of a site of resistance, this student interprets how one’s whole self is brought into relation with histories-in-place. When “you can metaphorically be in the shoes of a person or people who were there,” you can “actually [make] a connection with that location” through an embodied reflection, stabilizing what it means to be networked across and within a larger historical narrative.

Several students relayed that Site Visits removed the filter of classroom walls so people *confront* the lived realities of each other, people who used to walk the paths of campus, and the greater community, conjuring a spatial imaginary of what has been and what could be. The visibility, indeed vulnerability, of Site Visits provided vibrant reasons for relationship building and sustainability. When students (and instructors) came literally face-to-face with the lived experience of others—with the efforts and undertakings of past resistance to hegemonic power—they learned what is necessary to be in relation with those truths and they are, in turn, transformed; where embodied experiences are concretized by being *in place*, and new relationships are stabilized across histories and present moments.

Discussion & conclusions

Our course design is predicated on the notion that students can reorient their views on learning (and teaching) by being at the center of relational and transformational exchanges in, with, and for their/our communities. This central position invites students to both enact learning as a relational and transformational process and reflect on the ways in which this form of learning is consequential to not just the individual but to the community at large. To make this possible, we provide students with opportunities for interaction through varied media in which they have fuller contextual information and can become critically reflective about the places and stories they encounter (Land & Zimmerman, 2015; Mezirow, 1997). We see this as a way of creating pedagogical entry points, or scaffolding students to confront and accept a transformative experience (Taylor, 2007) where they can empathize with the activists who set the stage for their own opportunities for resistance.

We recognize this work as ongoing, and that reformations of technological assemblages—between bodies and places in a post-digital landscape—are constantly in flux. Places change, the capacities of our technologies change, people’s ideas and values change, and the institutional landscape of higher education is shifting as we write. Yet, we see several emergent design objectives that should remain constant in future versions of the course. First, we will continue using mobile, digital technologies as a conduit for far-reaching learning opportunities and for helping students document and stabilize the new relations they create in these locations. Second, we are committed to Site Visits as being a disorienting experience for students in which they confront different versions of “education” and must construct a new, socially shared interpretation of teaching and learning that fits with their various observations. Third, we see the movement between Site Visits and Lab Days (in which students reflect on Site Visits with concepts from course readings) as a way to close the gap between scholarship and community activism. For scholar-activists and a cohort of students who imagine their professional trajectories as sustaining communities, closing this gap is essential for being true to our collective values.

In other ways, ongoing and retrospective analyses have prompted changes in our own research and pedagogical values. As one example, we have become increasingly aware that many, if not most students in the course, come from a wide range of Puget Sound communities, but that they also share an affiliation as university members. Therefore, we hope to design Site Visits that build upon that common affiliation from the very start. Also, because many students want to do Site Visit work in the places where they lived before attending university, they have asked for more time and flexibility in traveling further afield for Site Visits. Therefore, we incorporated a hybrid element where Site Visit groups can join a Web Day, virtually, from any location so students have more time to travel further from campus if desired.

Finally, we argue that this instructional model does important work of putting students at the nexus of building relationships between the university and other community settings around the city. Site Visits concretize students' conceptions of learning across contexts as they pull together experiences from around the city to analyze the urban community in which they dwell. This repositioning of student expertise and development means that learning is consequential to the health and well-being of our social fabric; that the content and outcome of classroom learning is a form of community stewardship; that teaching and learning bring together ways of being and knowing toward a revitalized relational network of potential futures which are far more complex than a singular efficiency model of school based in market-led initiatives. Our design works to hold bodies and histories-in-place together to realize a spatiotemporal Web of relations within the present moment, where students develop transformational perspectives about the powered forces at work in people's (learning) lives which is substantiated by the emotional investment they have in seeing their own communities succeed and grow.

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Statements on open data, ethics and conflict of interest

The data uploaded to Siftr are publicly available as long as the site remains active. In accordance with IRB approval, all other collected data are maintained within a secure server where participants' identifiable information is kept separate from their coded pseudonyms. On this project, data availability is limited to the research team and shared at the discretion of the principal investigator.

This research was conducted under approval of the Human Subjects Division, Independent Review Board at the University of Washington in Seattle. All participants went through an informed consent process before data collection.

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