ARTFULLY CONVERTING OPEN (URBAN) SPACE TO LEARNING SPACE: MOBILE LEARNING AND (KOREAN) LITERATURE

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Abstract

This paper outlines the creation of an urban mobile learning activity that attempts to engage literature spatially, collaboratively, and compositionally in an urban setting. The Korean novel Three Generations by Yom Sang-Seop (1931) is engaged through mobile learning. The reflective and analytical activities surrounding the novel are translated into field-based activities (Gallagher, 2013). Participants are assigned locations, or chapters that unfold in locations. They generate a reflective analysis of the assigned content, collect the field data, and compose that data collaboratively into compositional geocaches (see Farman, 2009). These compositions can be multimodal representations of literary activity, media collected and cohesively assembled into a composition, and/or an analysis of the chapter from the novel. Groups of students find these embedded compositional geocaches, log their discoveries, and re-assemble the novel based on the class's interpretations and presentations. This activity is positioned within a definition of mobile learning that emphasizes learners that «artfully engage with their surroundings to create impromptu sites of learning» (Sharples et al., 2009) while

ISSN 2038-3002 - Vol. 6, n. 2, 2015, pp. 294-307

unmooring the sedentary structure of historical and literary knowledge in the urban space.

Keywords

Mobile learning, Korea, literature, open learning, pedagogy

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1. Mobile Learning in the Korean context: Adapting Sharples and colleagues, 2009

One theoretical precursor to the success of this project is the repositioning of mobile learning away from its more technologically deterministic permutations evident in earlier research. Earlier definitions of mobile learning were generally technologically oriented (as discussed in Kukulska-Hulme et al., 2005), or even positioning mobile learning as an extension of eLearning (Quinn, 2000; Traxler, 2005). These proved insufficient for the evolving context and practices of mobile learning as they emphasized the technology or the location and not the fluid social practices emerging from these contexts (Roschelle, 2003).

Mobile learning was progressively defined and convincingly positioned by Shaples and colleagues (2009) as an incessant cycle of produced context, where learning occurs and in turns feeds into a refined contextual environment where further learning takes place. Mobile technology not only makes 'visible' these learning engagements and cycles of generated context, but structures them. Informal sociocultural and technological practices of communication and meaning-making are absorbed and modified through mobile technology and coupled with the disciplinary, formal practices associated with humanities study. This paper adopts and attempts to expand on this positioning (Sharples et al., 2009) of mobile learning as a less technologically deterministic act and a more contextually specific set of practices and activities.

It also does so with learning practices aligned with the disciplinary practices at work in the humanities (literature, history, architecture, urban design, sociology, or other disciplines with relevance to this learning activity) along with the informal, sociocultural and technological practices specific to the Korean context. In this Korean context, this amalgamation of practices made 'visible' through mobile technology is often 'retraditionalized' (Yoon, 2006), a process whereby Korean cultural practices are repurposed as "new technology is in fact perceived and consumed through local filters including social relations and norms" (Yoon, 2006). In short, the practices specific to the humanities (observation, documentation, analysis, composition, dissemination, iteration) is coupled with the informal practices of communication, enacted through mobile technology, and filtered through the Korean sociocultural context to generate meaning. A technologically deterministic definition of mobile learning is structurally inadequate to do this complexity justice.

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Mobile learning as defined in this paper will assume the following:

- Learning occurs across multiple contexts, amongst people and interactive technologies (Sharples et al., 2009); by focusing on mobility, we reveal the movement across contexts, from informal to formal, from public to private, across time and space contexts.
- Learning encapsulates high and low states of transactional distance (Park, 2011); activity will move towards and away from the university or formal learning institution as 'center' of learning (transactional distance). We must respect that movement.
- Learning is mobile in both material (physical) and cognitive form; the transformation of habitus makes visible the mobility of cognitive activity (Kress and Pachler, 2007).
- Learners «artfully engage with their surroundings to create impromptu sites of learning» (Sharples et al., 2009).

2. Fields of Activity: Geodividing exploration and geocaching compositions

As originally conceived, the activity is broken into several discrete activities, ones that aggregate into a larger project. The novel is first read and discussed as part of a formal curriculum. The reflective and analytical activities surrounding the work are translated into field-based activities (outlined in Gallagher, 2013). Participants are assigned locations, or chapters of the novel that have a geographical focus of activity (as the chapters are divided into scenes, scenes that are then found in particular locations, there are clear delineations between the activity). They are tasked with creating an inventory of available technology (mobile, analog, and otherwise) and an agenda for collecting field data at that particular location (audio, video, imagery, GPS, text) in Seoul. They are tasked with identifying the affordances of each mode of data collected in contributing to the holistic representation of their location and their assigned chapter.

They generate a reflective analysis of the assigned content, collect the field data, and compose that data collaboratively into a geocache, which is essentially a GPS located collection of materials that other groups are tasked to find based on the locative information in that chapter of the text (discussed in Farman, 2009). The geocaches are composed collaboratively across a range of modes and media, activating multimodal literacies (Cope, and Kalantzis, 2009). These compositions can be multimodal representations of literary activity, media collected and cohesively assembled, and an analysis of the chapter from the novel. They should include evidence of socialized or collaborative activity to demonstrate an

attempt to reconcile the interpretations of the larger group or class. The groups are then responsible for embedding the geocache in the local environment (by drawing on GPS) along with finding aids. Groups of students find these embedded geocaches, collect the compositions from each, log their discoveries, and re-assemble the novel. Reflective prompts are embedded throughout this process for greater emphasis on critical thinking. The activities are presented in table 1, along with learning theories being engaged and the pedagogical outcomes.

TABLE 1
Activities, Theories, and Outcomes

Activity	**Description**	**Learning Theory Being Engaged**	**Pedagogical Outcome**
Literature: reading and discussion. Initial research and mapping. Chapters or scenes assigned.	To familiarize students with the novel, with the historical themes, sociocultural significance, urban design, etc. To begin to map historical locations to modern ones. To research historical representations of these locations (most notably through media and textual depictions).	Depending on the discipline in which this activity is being contextualized around (literature, history, etc.), the theories being engaged here are Vygotsky's Zone of Proximal Development and Bandura's social learning (1971).	Familiarity with the novel and an ability to articulate the outline of activity in the story. The ability to identify modern geographical equivalents presented in the story with their historical counterparts.
Technological Inventory, Data Collection, Itinerary Planning.	Develop an inventory of technology available for the field activity; identify the modes of data being collected (audio, video, text, GPS data, imagery, sketches, etc.) and their affordances.	Multimodal and technological literacies as outlined by Jewitt (2006); the presence of experiential learning (linked convincingly to mobile learning in Lai et al., 2007), found throughout this activity, is especially prevalent here.	A proposed itinerary of activity, a proposed set of data collection points, and a process orientation to the field activity.
Field Activity: Data Collection, Mapping, Preliminary Compositions, Reflexive Practice.	Data collection, mapping of that data, reflection on the quality and applicability of the data collected	Mobile learning as positioned in this paper (Sharples et al., 2009; Kress and Pachler, 2007), social learning (Bandura, 1971); multimodal literacy (Jewitt, 2006).	A capacity for articulating the quality and applicability of the data towards a composition; a geospatial awareness of how this data contributes to the environment in which the characters enact the literature.

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Geocaches and Embedding Time Capsules; Finding Aids	Finalizing the compositions and positioning them as geocaches in the locations in Seoul from which they emerged.	Geocaching (as discussed in Farman, 2009 and 2013; O'Hara, 2008; Chavez et al., 2004) embraces strands of several learning theories discussed in prior parts of this table.	Developing and embedding geocaches of compositions emerging from this activity; the development of finding aids that suggest, but don't directly articulate, the location of these geocaches.
Geocache Discovery and Assemblage	Teams find the other geocaches, collect the compositions contained therein, and reassemble the novel through the proxy of these compositions.	Embracing again much of multimodal literacy as proposed by Jewitt (2006), particularly in its emphasis on ensembles (as defined in Kress, 2010) as assemblies of meaning across modes.	The discovery and recreation of the novel via the proxy of student compositions.
Reflective Practice: Iterations and Analysis	Reflective practice is embedded at various stages of this activity (reflecting on the quality of the collected data, for example), but a summative reflection is inserted to consider the aggregation, or ensemble, of collected compositions as a proxy for the novel itself.	While functionally grounded in the work Sengers et al. (2005) on reflective design, these prompts are attempts to foster critical thinking within the Zone of Proximal Development (Vygotsky, 1978).	Critical capacity for reflecting on the efficiency of this activity in fostering literacy across the content, across history and urban space. Critical capacity for evaluating self-efficacy in relation to the topic.

3. Aligning the historical and colonial with the modern and post-industrial in Seoul

The mobile learning activities described in this paper are applied to the Korean novel Three Generations by Yom Sang-Seop (염상섭), first published in serial form in 1931. The novel is a seminal work in Korean literature and is taught throughout the curriculum of Korean formal education. It chronicles the plight of three generations of a Korean family under the Japanese colonial regime (spanning approximately 1910-1945). It details a family struggling between the duties of Korean tradition and the inexorable pulls of modernity, a modernity imposed or emblematic of Japanese colonialism. The three generations are the grandfather, Cho Ûi-gwan, a traditionally-minded landowner who attempts to become a

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Korean nobleman (yangban) through the purchase of a lineage genealogy; the father Cho Sang-hun, who has accepted much of what is being presented as modernity but still lives by wasting the family fortune; and the son Cho Tôk-ki, who is caught in the discord between the father and grandfather.

More importantly for this paper, Three Generations is also a novel highly rooted in a geographical landscape, situating the activity and repeatedly mentioning place names and landmarks throughout Seoul, not unlike James Joyce's Ulysses in its treatment of Dublin (1922). The novel follows these characters in their movements throughout a colonial Seoul; while these movements and the mentioned landmarks are familiar in the context of the novel, many have changed since independence (1945), or have been obliterated altogether either through the Korean War (1950-1953) or through the rapid modernization that followed (1960s onwards). Neighborhoods have remained largely intact (in name if not in architecture) and several landmarks that are mentioned in the novel still exist (Seoul Station and the Bank of Korea, for instance, are still landmarks in the topography of Seoul). Yet the mobile learning activity itself would prove challenging for students raised in post-industrial Seoul.

Fig. 1. Historical overlay of the Bank of Korea, Seoul from the colonial 1920s and from post-industrial modernity. The location of significant activity in the novel Three Generations, or, a possible composition emerging from these activities bridging the historical and colonial context of Seoul with its modern, post-industrial context. Images like this could represent a composition that was geoacached as per the activities outlined in Table 1. The mobile learning presented in this article is explicitly concerned with this type of ephemeral context creation where learners create 'impromptu sites of learning' (Sharples et al., 2009) amidst the

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artifacts of their own data collection and historical research. It is important to note how these historical overlays foreground the urban space itself as an agent in the history and literature being engaged by these students, a movement from the public to the private across time and space contexts. Image from Gallagher, 2013.

It is this quasi-historical context that suggests an opportunity for a field-based mobile learning activity as it can be positioned with relative accuracy in modern physical space. It is this physical mobility, this location-based description of Seoul from 1931 that presents the focus of this research as a formalized learning activity, one that both complements and challenges the existing curricula in South Korean formal education. From this context, questions arise as to the positioning of mobility in this context; what role does mobility have in 'loosening' or making ephemeral the historical and architectural contexts being presented in formal education? What role does mobility have in generating the alignments discussed in this paper, and indeed, what alignments are made possible through mobility and mobile technology? In this research, students not only align their historical, pre-industrial, and colonial understanding of Seoul's urban space with the modern post-industrial space, they do so by engaging seminal literature that documents the inexorable strains of one family's attempts to acclimate themselves to a rapidly changing world; it is literature that chronicles (an unwelcome) mobility itself, a mirroring of the learning context being generated in these mobile learning activities.

The focus group for these activities is South Korean graduate or undergraduate university students based in Seoul universities majoring in literature, history, Korean Studies, or related humanities-based disciplines. The secondary focus group is secondary school students in Seoul studying in similar disciplines. These activities could also be applied to those pursuing (at the university level) or with an interest in (at the secondary school level) related majors: architecture and urban design, for example. With 38 universities in Seoul and over 2000 secondary schools throughout the country (most of which teach Three Generations as part of the curriculum), the potential impact for such a learning activity and related technological application is considerable. Yet, while this project is focused exclusively on the Three Generations novel and specifically on the historical/modern/literary urban spaces of Seoul and the Korean context, it is hoped that such a system allows for similar explorations of place-based literature, histories, or other texts in other contexts or locales.

4. Technological Context: Time and Space

While this paper continues the progression of mobile learning away from its more technologically deterministic iterations, it does not negate

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the capacity for mobile technology to structure and make visible the learning activities described here. Mobile technology affords the learner the capacity to bring together potentially incongruous strands, or layers, of inquiry. For example, the merging of the historical, colonial context and the modern, post-industrial iterations of Seoul in one learning context is made possible precisely through mobile technology. Mobile technology, beyond the more pragmatic aspects of data collection and organization (audio, video, text, image, GPS, etc.), acts as a laminate might in this way. It allows the learner to layer one context over another; the historical becomes the modern, the literary becomes the political, the architectural becomes the colonial, and so forth. The permutations of context that might be represented are dependent solely on the inquiry framing the activity and the data collected.

The use of geocaches as a means of discovery (finding the other geocaches) and ensemble (assembling the compositions from the novel into one coherent whole) affords, or extends, an additional layer of context that the laminate metaphor introduced: time as context. The use of geocaches (or geolocated media) for learning or narrative effect has been convincingly presented in Farman (2013, 2009), explored as a psychological and social act in Chavez et al. (2004) and O'Hara (2008), expressed as a playful act in Hooper and Rettberg (2011), and positioned as a persuasive act in Gram-Hansen (2009). All of these positions dovetail, and indeed are engineered to dovetail, into the learning activities described in this paper: geocaching becomes an act of playfulness, of social and psychological motivation, and even of persuasion. Yet the additional context of time is embedded and revisited throughout this process. The students are playfully engaging and layering contexts of time (the historical context of the novel and the modern day; the time between when the geocaches are embedded and when they are found and re-assembled). This element of time is configured as what Ihanainen and Moravec (2011) have termed overlapping time: configurations of overlapping periods of time thrust together in iterative contexts and perpetually enacted via social technologies. It is hard to imagine this level of contextual complexity across both time and space being made useful (or anything other than disorienting) without (mobile) technology.

5. Advancing Mobile Pedagogy

The learning theories and pedagogical outcomes as listed in Table 1 serve to illustrate the potential range of learning made possible by the mobile activities outlined in this paper. Through a process orientation (as described in the Field of Activity section), a multimodal and compositional

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orientation, through the adaptation of a formal method of inquiry in the humanities (the basic notion of field work), and a playful dissemination of knowledge gleaned from this learning (geocaching), we begin to see the basic structure of a mobile learning pedagogy emerge. This is a pedagogy that attempts to make use of the contextual complexity inherent to the mobile experience by engaging the learner across a range of contexts; a matching of the function (pedagogy) to the form (contextual complexity).

These activities are designed for transferability of learning from one facet to the next, from the micro to the macro, across disciplines, and spanning informal and formal learning. These activities are designed to foreground the process by which open space (presented in this paper as the Seoul urban landscape) is converted to learning space through a conceptual frame (in this instance, literature) and through a (mobile) technological structuring. As such, it is highly replicable and relevant to the further development of lifelong and informal learning. For instance, we engage the learner in reflective practice on the affordances of each mode of data collected, then ask them to coherently compose those modes into ensembles, then ask them to embed those compositions in geocaches linked to the locations in which the activity emerged. They move from the granular mode to the composite composition. Multimodal literacies are fostered across informal and formal spheres of learning; multimodal practices are drawn from the informal (mobile phone practices used for data collection as detailed in the Korean context in Hjorth, 2007) to the formal (compositions reflecting the knowledge practices at work in the humanities). In this positioning, history and literature become 'real-world' multimodal constructions across the time and space, both playfully conceived and disseminated, but with the rigor expected of the disciplinary community.

Further, we see evidence of a heightened sense of geospatial awareness, which may be likened to an instance of reflexive context awareness as described by Pachler, Bachmair and Cook (2010). Students in the activities described in this paper are forced to consider the geospatial across a shifting context (the 1930s and the modern day, in one instance), and to consider the «attendant practices veiled by their situated nature» as well as the generated contexts «hidden behind routines» (2010). Informal mobile practices as common as navigation (using GPS to find a location), photography, communication (texting or calling), and research (looking up information to fill in knowledge gaps) are all made 'visible' and iterated upon to some degree through reflective practice. Students are forced to consider how these seemingly innocuous practices and ubiquitous technologies are co-constructing the contexts in which they function. They are forced to consider the ephemerality of space itself as the city itself shifts from time to time, reflect on the modes or ensembles best suited to

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represent that ephemerality, fostering the development of the 'attendant' practices of multimodal literacies.

Further, the underlying mobile pedagogy girding this mobile learning activity is inherently designed for replicability and adaptation, further suggesting the possibility of transference. While the case described in this paper is specific to Seoul and a particular piece of geolocated literature, the structure of the activities themselves are decidedly ambiguous, designed to adapt to other disciplines (history, architecture, political science, urban design, sociology and so forth), other ensembles of modes, other locales, and other sociocultural constructions of meaning (how might different cultures 'retraditionalize' their sociocultural practices through mobile technology as Yoon, 2006 describes?). What we have is a fluid structure upon which learning activities might be superimposed (again, drawing on the metaphor of the laminate) and enacted through mobile technology by a teacher or a self-directed learner.

6. Future Directions for Mobile Learning: Laminates and Manipulating Context

As a case study, there are limitations to this approach. First, it would be important to develop a pedagogical framework for adapting literature through mobile technology through trialed examples, made available preferably for reuse by the teaching community as an open educational resource (OER). Further research is needed on multimodal composition and assessment, particularly for those communities using these activities to supplement and drive a formal, disciplinary exploration (as would be the case with higher education and secondary schools, particularly in the Korean context). For all the generated multimodal compositions and their subsequent aggregated ensembles, modes of assessment would need to be evaluated to ensure that multimodal compositions were rhetorical rather than merely aesthetic constructions. This does not negate the importance of aesthetics as a subset of coherence (van Leeuwen, 2004), but rather insists that it is coupled with rhetorical advancement of the inquiry under investigation.

Technologically, there are several limitations to the approach defined in this paper. First, there is no one application (to the author's knowledge) that accounts for all the practices and data that need to be collected, composed, and disseminated. This essentially requires pulling several applications into one 'daisy-chain', or sequence (the Open Annotation Data model, 2013, draws closest, but has yet to be fully adopted). Further, much of the underlying metadata that would facilitate linking between compositions, collected data, or geocaches in meaningful ways is absent. While it is possible to link mobile media to location and text to location

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(manually annotating the text), it is cumbersome to link media to text through a specified location; this is partly due to the lack of a convincing data standard to address the use case defined in this paper. As this daisy chain of applications would potentially require the student to expose data online, there are significant ethical, privacy, and safety issues involved. These are addressed in Gallagher (2013) specifically for mobile applications, but these issues can be mitigated, if not removed, by relying on native applications for data collection, retaining a skepticism towards applications that don't allow for data exports and account deletion, and avoiding hosting services. Further, these issues can employed in a pedagogically productive way as they force a reflection on the nature of privacy and security in a mobile, perpetually connected world; pragmatic learning activities might involve the careful consideration of each of the Terms of Service for each of the applications to demonstrate what level of scrutiny these students are exposing their data to.

Despite these limitations, mobile learning of the sort described in this paper continues to navigate mobile learning away from technological determinism towards the complexities of constructed context as presented through mobile technology. Learners in this context are engaged, indeed challenged, to make use of that context across a range of focal points: from formal to informal learning, from disciplinary practice to sociocultural practice, from different permutations of time and space, and from the granular data to the composite composition. Unlike the family presented in Yom Sang-Seop's Three Generations, learners in this laminated layering of Seoul can be encouraged to manipulate, even control, the context to construct meaning from complexity.

* Inspiration for this paper was drawn from the Gusts of Popular Feeling (2006). The Three Generations' Keijo Walking Tour. Retrieved June 1, 2015 from http://populargusts.blogspot.kr/2006/11/three-generations-keijo-walking-tour.html.

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