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Mapping literacy practices: theory, methodology, methods

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The *Literacies for Learning in Further Education* (LfLFE) research project has been funded for three years from January 2004 as part of Phase 3 of the Teaching and Learning Research Programme in the UK. The project involves collaboration between two universities and four further education (FE) colleges. The intention is to investigate students' everyday literacy practices and explore ways of mobilizing these to enhance their learning on college courses. The LfLFE project does not view literacy as a set of individual skills and competences alone, but as emergent and situated in particular social contexts (Barton *et al.*, 2000). As such, literacy practices are not static or bounded spatially or temporally. A central concern for the project is to understand how the literacy demands of college life and being a student relate to students' other literacy practices. As part of the work of the project, the group is undertaking a 'mapping' of the literacy demands associated with student learning across a wide range of FE courses. This paper explores the methodological debates in planning and operationalizing this mapping.

Introduction

This paper draws on empirical data collected on a TLRP Phase III research project, *Literacies for Learning in Further Education* (hereafter, LfLFE).² This project builds on a pilot study (Smith, 2004) which found that FE students engaged in a sophisticated and complex variety of literacy practices outside the college that were not easily transferred into college-related literacy events. The premise for the current project is that the literacy demands and practices of FE colleges are not always fashioned around the resources people bring to student life. Therefore, the task of the three-year LfLFE project is to examine literacy demands and literacy practices in FE, and thereafter to research the impact of interventions that seek to mobilize the literacy practices of students in new and more effective ways.

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This research focuses on the use, refinement and diversification of literacy in FE. We are not concerned with the learning of literacy as a basic skill, but with the diverse *literacies* that students may bring to their learning and those that their learning requires; with the diversity of practices through which positive learning outcomes will be supported and developed in a range of subjects and at a range of levels. From a social practices perspective, ‘in order to understand literacy it is important to examine particular events where reading and writing are used’ (Barton, 1994, p. 37). Building upon Heath’s concept (1983), Barton suggests that literacy events are the first basic unit of analysis for a social approach to literacy, and that they are a constituent of literacy practices. As Hamilton (2000, p. 18) explains, ‘visible literacy events are just the tip of an iceberg: literacy practices can only be inferred from observable evidence because they include invisible resources, such as knowledge and feelings; they embody social purposes and values; and they are part of a constantly changing context, both spatial and temporal’. These ways of conceptualizing literacy are elaborated by Barton and Hamilton (1998) in relation to the everyday lives of adults; in this project we intend to extend this approach to college students in FE. For the purposes of the project ‘literacy practices’ encompasses the knowledge, feelings, embodied social purposes, values and capabilities that are brought into play through the reading and writing of texts. The substantive and empirical focus of our research is on the ways in which literacy practices that involve written language in some way can or might support learning across different subjects in FE. Following a recent spatial turn in literacy research (for example, Leander & Sheehy, 2004), this paper looks at the research team’s efforts to devise a *spatially sensitive research methodology* that attended from the outset to the multimodal (Kress, 2001), situated and embodied experience of staff and students. AQ1

The project is designed around four overlapping phases, central to which was the aspiration to ‘map’ the literacy demands of being a college student of specific subjects, the literacy practices generated by those demands, and the literacy practices in which students already engage in different domains of their lives. In the process, we have had to bring to the fore our taken-for-granted assumptions at a methodological and theoretical level of what we mean by ‘mapping’. This paper attempts to provide some insight into the implications for our project—and, it is hoped, for others—of what can happen when we take ‘mapping’ seriously as a research method. Three forms of mapping are briefly described that were part of the project’s initial phase: mapping conducted by FE lecturers, by the researchers, and by the students as part of data-collection methodologies. After a theoretical consideration of the affordances and constraints associated with mapping within research methodology, more detail is offered on how students were involved in the methods themselves. The paper concludes with a summary of what mapping has meant within the project and consideration is given to mapping as a metaphor for other research foci.

FE lecturers’ maps

At the outset, members of the research team noticed that some further education staff mapped the elements in a vocational or academic curriculum against the outcomes



which constitute the ‘Key Skills’ (England) or ‘Core Skills’ (Scotland) of communication, numeracy and ICT. They do this by ticking off the Key/Core Skills outcomes they consider are being met against the curriculum taught. In England particularly, there has been encouragement to do this since the introduction of Key Skills to Curriculum 2000. In effect, they are mapping what they see as the relationship between the subject curriculum and Key/Core Skills. This is mapping in the mathematical sense of the word,³ meaning ‘associat[ing] each element of a set with an element of another set’ (NODE, 1998). We initially envisaged Phase 1 of the project in these terms, attempting to access some of these mappings as self-evident data on the literacy demands of FE courses. However, we were committed to doing more than just collect documentary evidence. We realized we needed to understand more deeply how staff *teaching* curricula viewed the literacy demands they made, how students were *experiencing* curricula in terms of literacy demand, and also the views of staff responsible for *supporting* students in their attempts to meet the demands of the curriculum. Our next step was to consider more pragmatically how researchers would ‘survey this landscape’. This term was used as a metaphor to refer to the general process of data collection and analysis undertaken thereafter.

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Researchers’ maps

Because we were committed to doing more than collecting documentary evidence, interviews were conducted and questionnaires completed by staff across a sample of courses in the four colleges. The mapping undertaken by us as researchers through analysing this sort of data loses the two-dimensionality of a physical map: what we initially felt we were doing was map-making in the metaphorical sense of engaging in the conceptual activity of ordering, categorizing and flattening. While case study and thick descriptions would be generated out of later phases of the project, for this initial survey we hoped to synthesize a variety of participants’ perspectives in order to produce a synoptic representation or overview ‘map’. By remaining sensitive to some of the spatial aspects of data in terms of students’ experience of literacy demand within and outside classrooms, we found that our perspectives on this would change.

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Respondent’s maps

Guided by the aim of mapping the literacy demand landscape of students, we devised various methods for data collection with students. We look at these under ‘Data collection methods’ (below). We wanted these activities to be sensitive to the multimodal, embodied and situated nature of the literacy demands faced by students so both involved the active participation of respondents in map construction or annotation.

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Before looking more explicitly at the methods of data collection, we examine some theoretical issues raised by using the term mapping both literally and metaphorically to describe a research methodology. In this section, some of the affordances⁴ and constraints associated with viewing research as mapping are reviewed.



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Mapping: the affordances and constraints

We are not the only ones to attempt a ‘mapping’: from a quick scanning of book titles it would appear that almost anything can be mapped these days—the mind, the body, human subjectivity, concepts in philosophy, work processes, the human genome, social networks. Centrally, mapping involves the conceptual activity of ordering, categorizing and flattening through boundary marking (or making) with sometimes far-reaching effects for the people or activities. A map-like model may appear to be a material artefact or assemblage of artefacts that represents a landscape in the traditional way, reduced in scale and depicted as though viewed from overhead: a map made with a god’s-eye view. However, in the home ground of map-making—geography—Dorling and Fairbairn (1997) remind us that maps are not neutral or always drawn to the same recipes. They take a look at how diverse approaches to map-making set out to control as well as understand the world. The first affordance (which might also be viewed as a constraint) is therefore that while maps provide a subjective view of reality they may pretend to be, or are read as if they are, objective and final.

The notion of mapping provides an umbrella for a broad range of practices and forms of representation. For example, concept mapping has a long established pedigree. More recently, the notion of social cartography has found some purchase in the social sciences. Mapping has also been an important concept in branches of post-structuralist writing, to which the spatiotemporal ordering of practice is critical. Here, mapping and map reading can be understood as a more unstable dialogical process of connecting time–place and practice together. For Massey (1994, p. 120) a place is continually produced out of its connections to other places over time. Rather than seeing places as closed and bounded with constant features, places are better seen as ‘networks of social relations’. Because places are ever emerging and networked, each mapping practice provides different interpretations and therefore maps of the terrain to be investigated. Paulston (1996) defines social cartography as the writing and reading of maps addressing questions of location in the social milieu. This work involves the interpretation of objective reality and the representation of spatial relationships among different concepts and artefacts. But in social cartography the map itself can provoke further debate and is not seen as an effort to write a final truth. The second affordance is that while some maps may allow us to connect time, place and practice together they do not offer a final map of a unified terrain but become yet another object of inquiry.

Leander (2002) notes that while we commonly think of literacy events as being embedded in some context, we have less frequently considered how they are involved in the ongoing production of space–time. A related constraint of research-as-mapping is that since networks of spaces and social practices are co-produced, it may be difficult to find ways of noticing when multiple space–time contexts are at play in any literacy practice. Another constraint is that because literacy practices are both dependent on and productive of space–time contexts, one may over-privilege the spatial at a cost of missing what temporal, oral, text-based and other forms of data might offer.



The third affordance, also with a related constraint, concerns how mapping forces a degree of reflexivity with regard to how reality gets constructed. Edwards and Usher remind us, ‘meaning is made through mapping rather than found’ (2000, p. 138). But whether maps were found, constructed by researchers or drawn by respondents, we note that all are involved in making meanings through boundary marking: the teachers are marking out the relationship between their subject curricula and Core/Key Skills, the researchers categorize data and create coding mechanisms, and the students are making cartographic meanings out of the literacy practices in their lives. In this respect, we subjected our initial term ‘surveying the landscape’ to critical scrutiny, recognizing that it carried connotations of ‘finding’ a landscape rather than ‘making’ it. As a result we now prefer the term ‘map-making’ to refer to the process of investigation. Reflexively, research-as-mapping affords the potential to be critically revealing of the processes of enclosure, partitioning, coding and ranking (see Elden on Foucault: Elden, 2001) of experience through the research process itself.

In the next section we describe some of the methods we used to operationalize a mapping of literacy demands, mindful of the theoretical considerations regarding map-making and map reading outlined here.

Data-collection methods

Four examples from the data are explored to show how the mapping metaphor was operationalized in the practice of doing research. The first is an example of a researcher-taken photograph taken from an initial ethnography of the college space. The second is the Map Annotation Activity. The third is the Photo-elicitation Interview process, and the last is the Icon mapping Exercise.⁵ These methods were triangulated within a range of methods, some of which were less attuned to the spatially situated experience of literacy demands. Questionnaires, field notes generated by researchers, some 60 interviews with students and staff in all, documentary evidence and focus groups with college-based researchers, student-taken photographs and researcher-taken photographs were all deployed.

Example 1: Photo-ethnography

We started the data-collection process by undertaking mini-ethnographies of the colleges as literacy sites. In order to attend to the visual, material and spatial characteristics of literacy practices in the colleges, researchers took photographs of the communal spaces and made field notes after each visit paying particular attention to the possible and actual practices of reading and writing found therein. The example photograph (Figure 1[]) allows us to see how literacy artefacts might be used to construct and regulate the use of space. The image provides data on the enclosure of the space for a certain function: healthy eating. It also indicates the possibility that there is (perhaps an inadvertent) coding of the dining area as a place for certain student and staff types. Mapping the space visually like this was revelatory of how literacy demands actively enclosed, partitioned off, coded and ranked.

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15 Figure 1. Photograph of the dining hall doorway—does the sign suggest an exclusion not just of overalls (as items of clothing) but overall-wearers?

*Example 2: Floor plan annotation*20
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Another approach to operationalizing mapping where the student's experience was privileged involved presenting students with a floor plan of their college campus and inviting them to describe where they went and what they did there (initially in general and thereafter in terms of reading and writing in particular). The idea here was to capture data on literacy events (and the literacy demands inherent in them) in different locations—both classrooms and other college environments (hallways, notice-boards, vending machines, dining halls). After initially orienting them into a general reading of the plan and checking with them that they were comfortable with finding the different zones of the college, students were invited to mark which places they accessed during their average college week. There was considerable discussion and laughter about deciding where they went. Next, we asked them to write on sticky-backed notelets what reading and writing they did in each of these areas (Figure 2).

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The annotation process provided an opportunity to discuss coursework in terms of literacy demands and practices based on events that were locatable in time and space. One of the main things that the students noticed was how much time they spent in the refectory and that they did quite a bit of writing there. The refectory was where they completed homework, and checked planners, timetables and deadlines. They also met up there before going to outside buildings to participate in an outdoor class activity. It was here they also read newspapers, sent texts to friends and read hand-outs. The activity also revealed—to the surprise of the students themselves—that they had writing to do in every class. One of the respondents did not have a computer at home so used the learning centre while another respondent worked mostly at home. The affordance of this spatially sensitive research method is that it can connect and be revealing of actual times, places and literacy activity and how these related to each

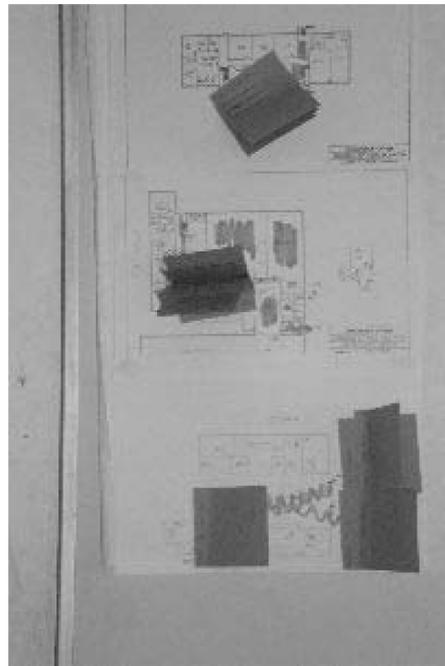


Figure 2. An annotated map produced by two male Health and Fitness students

other. By overlaying the ‘final’ map of the college with notes about practices in time and space, we note that the method is sensitive to the way literacy constructs space rather than simply being contained in it.

Example 3: Photo-elicitation interviews

In keeping with our theoretical commitment to gaining many perspectives on the literacy landscape of FE, rather than seeking to map from a god’s-eye view, we decided that the photographic depiction of literacy events should be created by students taking disposable cameras around the college with them prior to our interviewing them. This collaborative approach to research has similarities to Hodge and Jones’s (1996) research with Welsh and Muslim communities, and emulates their use of photographs as a catalyst for gathering further details of the literacy event represented in the photo in collaboration with the interviewee. The methods build on image-based research practices that have a growing currency in the social sciences. Photo elicitation or the photo-interview (Collier, 1967) is a technique that has been first developed in the field of visual anthropology but is now used more widely in other forms of sociological and psychological research (Mannion, 2003; Mannion & I’Anson, 2003). These approaches are becoming popular with researchers working with student respondents because it provides a way of addressing the imbalance in power between researcher and researched while offering a

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useful way of understanding the embodied situated and spatial experience of the respondent's world.

Because our theoretical focus is upon literacy events and practices, we encouraged students to photograph interactions with texts, rather than just photographing notice boards, fire signs and textbooks for example. The photographs were then used as stimuli for conversation in the interviews. Some of these interviews were carried out within groups of students; other students preferred to be interviewed individually. The majority of students had clear ideas of what they had been doing and talked about reasons why they had elected to photograph certain texts or certain interactions with texts: 'I think that was from a politics class, but I took it because I usually look at the poster in my room ... so that's why I just took that one.' The conversations then normally moved to a discussion of how the students interacted with or used the texts.

The use of the photo-elicitation method provided a useful arena in which students could evaluate and critique the literacy demands they faced. Sometimes these evaluations were positive as in the following extract from a conversation with two mature students who had photographed a notice board (Figure 3).

Student 1: Yeah, I took a photograph of [student's name omitted] there outside our classroom with all the examination dates up on the wall there, where we had to get our dates from.

Interviewer: It seems like there's an awful lot of information on that one particular sheet. Did you find it quite hard, or do you find it quite hard or easy to find your own examination times there?

Student 2: On those at the top, yeah.

Interviewer: Right.

Student 1: But they were in alphabetical order, so it was well laid out and probably done by [tutor's name omitted] so it would be precise, so yeah. They're already stapled to the notice board so nobody can sort of remove them.

Some students reflected on the reasons for their responses to different literacy demands around the college:



Figure 3. Checking the exam timetable



Interviewer: Do you take notice of these when you see posters with information around the college?

Student: Sometimes, but sometimes we don't really notice it.

Interviewer: Which ones would you notice? What would make you notice a poster?

Student: We look at the ones with big writing on. Not really, we look at the ones with small writing. We look at the pictures.

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And some reflections included critique of the ways in which students were expected to interact with texts in the college:

Student: It's awful. I took that. I was trying to take a photo of the Health and Safety laws. It's in the wrong place over there; you can't really notice it that well.

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The Photo-elicitation exercise afforded a focus on literacy events rather than literacy texts, which allowed us to begin to gain insight into how students negotiate the literacy demands of their colleges and how they interact with the landscapes of their college, their courses and their identity as a student in those colleges. The use of photographs in interviews led to conversations about the literacy events and literacy demands associated with texts such as their work-placement logbooks, the use of the library, the Internet and text messaging. College-based researchers found it fascinating to listen to literacy from a student perspective and find out what interests and motivates them. In some cases, it became apparent that students do not read something that tutors might consider very important. Other data demonstrated that students might have no problem sitting and reading a book on their hobby or interests (for example, astrology) but when it came to assignments for college, motivation sometimes waned.

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While the power of the method became apparent, on quite a few occasions we have found that student-taken photographs have not come back to researchers. We have since asked students about their experience of using this method. At least two students have told us that they enjoyed the taking of photographs but that they later became embarrassed or felt they would be compromised by the prospect of sharing these more 'private' images. Clearly, there are constraints relating to how best to handle the power and effects of probing into student cultures with spatially sensitive methods such as this.

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Example 4: Icon mapping exercise

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Another approach to 'mapping' with respondents was facilitated in focus groups through a participatory map-making task. To do this, we prepared small sticky-backed notelet-sized icons of different types of artefact, media and modes of communication related to reading and writing: computer, pen and paper, folder, diary, etc. (Figure 4).

Considering an average week in their lives as students, they selected icons they wished to discuss or made alternatives if no icon represented their ideas. The tasks involved pairs from the same courses selecting and configuring these representative text types. In doing so, the icons functioned as loaded reminders for respondents of stories about the literacy practices and literacy demands surrounding them. The

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Figure 4. After piloting, the set comprised some 30+ icons, and three examples are provided here

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sticky-backed icons combined with respondents' own terms to represent texts, modes and media of various kinds and the associated literacy demands and practices. As the process ensued, respondents were invited to talk about their selections and their placing of icons. Salient parts of this interaction and discussion were photographed, recorded and transcribed. They also repositioned the icons into sets—related groupings of icons that made sense together for them (home activities, computer-related, etc.) (Figure 5).

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One pair of students put the activities they did both at home and at college into one group, and separately grouped things they did solely at home, at work or at college:

S(M)⁶: [T]here's a lot of things which I do at home and college ... papers, using the computers, eh, using CDs, listen to music mainly, [and using] the calculators cos we're doin' an accountancy course, em, diaries taking notes and [reading] college books.

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Asking open-ended questions about the mapping of these icons revealed how these students used diaries to manage their lives as a whole. Their talk about these diaries

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Figure 5. Modifying their maps



and the literacy practices surrounding them indicated that there were literacy demands associated with tracking one's use of time on paper as a college student.

- S1(M)⁷: I've got a diary ... we've got a diary for college ... different dates
 I: You do that too?
 S2(M): Yeh [we have] different deadlines to meet an' the different classes so.... 5
 Interviewer: Is that something they gave you or something you bought
 S2(M): I bought it....
 Interviewer: And everybody has one?
 S1(M): Most of the class has one ... we got a wee one at the beginning of the year
 but I bought a bigger one 'cos there's that much happening ... so.... 10
 Interviewer: And do [staff] keep an eye on it or do you?
 S(M): No, no.
 Interviewer: It's private to you?
 S(M): [It's] personal yeh ... we can have stuff.... I've got stuff that's happenin'
 outside of college as well as in it....
 Interviewer: Yeh, right. 15
 S(M): To keep me right 'cos I get quite forgetful now.

For these students, some literacy events and their associated demands happened either at home or college (such as reading the newspaper, sending email to friends and doing coursework of various kinds) but when they discussed their icon maps their explanations supported the idea that the literacy events and demands associated with home and college and other domains were not so much bounded or separated from each other. Through the literacy practices of keeping a diary, being on the Internet, using email, home space appears to 'reach into' college space adding weight to Massey's (1994) view that places are better viewed as networks of relations. Conversely, the literacy demands and practices of college life appeared to infiltrate home life (see Jacobs's reading of Heidegger: Jacobs, 1996, p. 381). In fact, as their course progressed, some of these students noted that the activities related to coursework were increasingly displaced into the home. 20

The real strength of the icon-mapping exercise was in how it attuned researchers to the relationship between what might appear to be spatially remote and culturally unconnected contexts. Allowing students to rework the icons in different ways, in particular allowing students to locate icons in areas of the map between the domains of college, home and work, proved revealing of the links students made between contexts. This approach meant students could offer perspectives on how literacy demands were relevant across more than one space-time context. Using the map as a point of departure for a conversation, we were able to explore the polycontextual nature of reading and writing in a subject area for a given student: 25

- Interviewer: Is there any sense in which the reading and writing activities and the activities around the reading and writing ... to do with your social life become useful when you face the challenges or the demands of the reading and writing when it comes to being a student or your college work.... I see you're nodding your head.... 40
 S(F): Well the stuff that we're doin' in college because we're doin' social care it helps us wi' family lives as well you know problems that ... occur in the family, em ... we done like copin' wi' loss an' grievin' an' things like that an'

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wi' ma' friend she lost her granddad so I've been able to help her so it helps outside the college as well.

Interviewer: So college life can help your other life and your life...?

S(F): And social life can help college because you've got a background knowledge of how it does feel to lose or to grieve.

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We note here that the simplest literacy event can be networked across multiple time-space contexts—reading about the grieving process is given a different meaning once contextualized within the real-life experiences of close friends. When asked to reflect on the focus-group process, one student said that it made it feel more open and that it was easy to talk about their experience. They also felt comfortable with the map work because they could do something 'straight away' with the icons, which allowed them time to think about the spatial relevance of their literacy. The icons themselves worked as reminders of different sorts of literacy events and their associated demands. These pictorial representations gave them some ideas to catalyze their thinking. In reflective focus groups, they agreed it was useful to see how each other's maps worked out and they said they were interested in them.

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All of the approaches described take into account the idea that literacy demands are likely to be differentiated in terms of space, modality and their situation/contexts. In addition, the sorts of data emerging and our early analysis of them acknowledge the situatedness and partiality of different forms of mapping methods. Photographs taken by students revealed more personal kinds of data in spaces that researchers would not necessarily have considered relevant. Researcher-taken photographs were revealing of what students may have taken for granted in terms of how literacy demands were pervasive in the college space and how they functioned to rank and partition. The use of college floor plans enabled a focus on college life beyond the classroom walls. The icon-mapping exercise took a more holistic approach to understanding the multiple contextualization of reading and writing across the domains of home, college and workplace.

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Effects on students and staff

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The methods used reflect a desire to engage with respondents in various types of map-making; research can be more than the finding of a single map for a unified territory. In the pilot phase, conventional one-to-one interviews with students and staff ran the risk of encouraging the view that literacy was something students were in need of—a deficit model. The methods described in this paper tended to counter this view. This student noticed a change in the way she viewed literacy:

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S2 (F): I didn't know what it [literacy] meant before. I thought it was like—you know how dyslexia is a form of not being able to understand. That's what I thought it was. [Now] I understand it more. My view of it has changed now.

Methods described in this article were more sensitive to the spatial, situated, visual and embodied and had a more empowering effect on respondents. One student (female) says she feels as if she reads more now but is unsure if this is as a result of being aware of her own reading or actually whether this has substantively increased.



A female childcare student found the icon-mapping exercise quite cathartic. She appeared to use the opportunity to review her life through the lens of literacy and cried as a result of the mixed emotions it surfaced for her. Mostly, the effects on students related to an increased sense of the role of literacy in their lives:

S1 (F): I understand more how much reading and writing you use in your day-to-day life.... It's been shown to you how much you actually use it.

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AQ3 The effects on staff related. Unsurprisingly, perhaps, staff did not comment in much depth on students' situated experiences of literacy demands and practices in earlier data-collection phases. Later, all lecturers on the project attested to how these spatially sensitive methods had surfaced an advanced and quite complex view of the literacy practices of their students that had previously been hidden.

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With other approaches, students appeared to become aware that their responses to literacy demands were quite diverse, multimodal in nature and were relevant across spatial boundaries. In constructing these maps of literacy demands, we noticed that the sorts of data that emerged were quite dependent on the approach taken and revealed different constructions of what it meant to be a student, to face and experience literacy demands, and what it was to learn. The use of multiple methods also revealed that literacy demands were differentiated in terms of what was formally intended (in curricular documentation), what was facilitated by tutors in classrooms, and what was experienced by students within and outside college environments.

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Conclusion

As the examples will demonstrate, our methods reflect theoretical concerns raised in the literature about the spatialized nature of literacy and offer a distinctive interpretation of how mapping the literacy demand landscape in FE might be executed using a mainly ethnographic-type approach wherein spatially investigating, analysing and representing data was a strand. Taken together we now note that the methodology described here indicated degrees of acceptance of, or shifts from, simplified synoptic overviews towards a more heterogeneous and sensitive approach. This involved a shift towards:

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- the visual—in response to the changing semiotic landscape (inclusive of the visual, verbal, aural, written) (Kress & van Leeuwen, 1996; Ivanic, forthcoming);
- seeing communication as multimodal (Kress, 2003);
- the spatially situated nature of experience (Massey, 1994);
- mapwork of various kinds: those maps that are open to change, and emphasize readings about relationships and connections across boundaries (home/college, formal/informal learning, paper-based/digital literacies);
- the idea that the research process can change respondents and build the capacity of respondents and practitioner-researchers;
- seeing our own work as researchers not just as map readers but also as map-makers or constructors of overlapping landscapes with our co-surveyors, the participants in the research.

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Adopting a relational and cartographically informed epistemology and methodology has led us to accept that there is no Archimedean point from which to represent the world (Clifford, 1986, p. 22). Like the students, as researchers we inhabit multiple and intersecting worlds (of research, university, colleges). Multiple, overlapping and disjointed maps abound.

As researchers, we may be tempted to construct one map of what participants said, and what we observed about literacy demands and literacy practices, onto different spatial and conceptual categories. Among other analytical processes, we developed a coding scheme for the analysis of transcripts that mapped dimensions of literacy onto different aspects of students' lives at college. This coding scheme was potentially a form of enclosure, boundary marking and boundary making. With this in mind, we treated the process of coding as a means of questioning the categories and the relationships among them: we were alert to 'a certain slipperiness in these categories' (Richard Edwards, email communication). Mapping data to our analytical framework led us to identify subtler distinctions within our categories, to elaborate the detail of different maps. We continue to be reflexively aware of this categorizing and ranking in our work.

To extend our geographical metaphor, what are the horizons of our efforts? How do we attempt to map the mappings of others, when, as Pile (1997, p. 30) suggests, 'we occupy many places on many maps, with different scales, with different cartographies, and it is because we both occupy highly circumscribed places on maps drawn through power cartographies and also exceed these confinements, that it is possible to imagine new places, new histories...'. One of these new places might be a pedagogic space for further education where teaching and learning are less 'bounded practices' (Edwards & Usher, 2000, p. 72) and are more interconnected with the home, the street, the workplace and the multimodal semiotic landscape. Reflecting on how research can be seen as mapping has helped us in this next task.

Notes

1. This paper was authored mainly by Greg Mannion and Roz Ivanic. However, members of the whole LfLFE research team, including Roy Anderson, Angela Brzeski, Jim Carmichael, Richard Edwards, Zoe Fowler, Kate Miller, Candice Satchwell, June Smith and Sarah Wilcock, participated in the research on which it is based, and have contributed to the development of the paper.
2. Links at <http://www.lflfe.stir.ac.uk>
3. We are grateful to Dave Baker at the University of Brighton for pointing this out.
4. Affordances are seen to reside between a social or physical environment and a person. They are the properties of a context that furnish the person with the opportunity for action (Gibson, 1979).
5. Most of these methods of data collection were aimed at eliciting students' perspectives, but staff were key respondents too. Teaching staff and other specialist staff were interviewed at each of the four college sites. Interviews with teaching staff were semi-structured with a conversational focus on the teachers' planning of a particular course.
6. S(M) denotes male student. Where Scots language and its subsidiary dialects were used these are reproduced in the transcripts in so far as this is possible.
7. S1(M) denotes the first, S2(M) another male student in the focus group.

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