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Bridging the ICT Gap: A Study of UK Online Centres

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An initiative to create about 6,000 UK online centres aims to bridge the gap between those in society who have access to and are able to use information and communication technologies competently, and those who do not. UK online centres can be seen as networked community learning entities, playing an expanding role in formal and informal community-based learning.

The study described below provides a detailed snapshot of what was happening in UK online centres in the first nine months of 2002. The goal was to gain an improved understanding of the social context of the centres, and issues around the creation and exchange of knowledge within and between online community centres. The longer term goal is that if models of successful practice can be built, and cascaded by the community to new start-ups and more established centres, we will have the building blocks for sustainable capacity for bridging the digital divide.

Research questions
Emerging services, like UK online centres, increasingly act as a valuable conduit for promoting informal learning. But little is known about how these new networked centres function and the ways in which informal learning might occur at the centres. Particularly important research questions were:

- What is the social context of use of networked community learning and services, especially for traditionally under-served segments of society?
- What kinds of learning are occurring and how are they supported?
- What is the relationship between the physical and electronic aspects of informal learning communities?
- How is collaboration achieved between different types of online centres?

Methodology
Grounded theory and a pilot study were used to guide research. Grounded theory is especially useful for complex subjects or where little is yet known (as in this study), because of its flexibility,

which can cope with complex data, and its continual cross-referencing, which allows theory to be grounded in the data, thus uncovering previously unknown issues.

- Data from detailed interviews with 12 workers and users at five centres was transcribed and analysed (more than 100 person-hours were spent on this activity alone).
- Concepts (48 were identified) were classified and grouped together under higher-order, more abstract formations called categories ('life cycle', 'organisational links', 'people/ roles', 'informal learning', and a final catchall category 'not in a category yet'). Atlas.ti qualitative analysis software was used to assist this process.
- At first a small segment of interview data was analysed using Atlas. The two researchers checked they were coding in a similar manner (by both blind coding the same 1,000 lines and comparing results). The authors evolved a detailed coding manual which specified coding procedures and gave definitions and examples of all concepts and categories. A further 500 lines were blind coded by both researchers and the results compared and anomalies corrected.
- Initial low-level theorising took place in the form of category and concept formation
- The findings from analysis informed the design of a questionnaire, which was used to triangulate findings. Sixteen telephone interviews were then carried out with centre staff in nine regions.

Key findings
- 'External organisation links' was the concept most commonly mentioned in interviews, with a 13.15% occurrence rate. Such links were numerous, with a multitude of purposes, most commonly related to attempts to obtain funding or accreditation for courses.
- 'Goals' of the centre manager, activity designer, or a user/beneficiary was the second most identified concept (8.38%). This seems to point to UK online centres as a nexus of social and economic regeneration. The range of goals that

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motivate users and staff were various and powerful. These goals may be the core ingredient that makes a centre work, so an understanding of them is relevant in the context of building models of successful practice.

- The 'inhibitor' concept (6.88%) refers to the limitations placed on a centre by external forces or problems. There may be evidence that centre users and staff have serious concerns about a range of 'inhibitors', suggesting that optimism (goals) only just outweighs perceived barriers.
- A main concern related to 'funding' (5.07%), defined as any mention in an interview of sources of funding for centres and related activities.
- Exchange of knowledge within online community centres is related to the concept of 'content creation', identified on 44 occasions (2.21%).
- Exchange of knowledge between centres is a second-tier organisation responsibility. A large number of external organisational links were found, perhaps indicating some kind of knowledge sharing. However, we found little evidence of resource sharing between centres. The 'not invented here syndrome' may be responsible for this. More analysis of the data is required to understand these issues better.
- Support was found for a 'life cycle', or evidence of progression over time: beneficiary life cycle (2.46%); centre life cycle (2.86%); and staff life cycle (2.56%). In the early stages of the life cycle, local people were encouraged to drop in to a centre, and then engage with staff, other users and resources in a way that was personally motivating for them. As these users progress and gain confidence, they may decide to take part in a more formal activity.
- The survey evidence supports the validity of the progression of centre users through 'life cycle' stages.
- Clear evidence of an ICT literacy life cycle was also identified, in which users first undertook ICT literacy (2.56%), may have gone on to engage in an 'online community' (3.46%) and only then made use of 'e-learning' (2.01%). Currently there is a reliance on e-learning provided by BBC Webwise and LearnDirect.
- Almost all centres surveyed indicated that some form of e-learning is taking place, although different centres appear to differ over those activities they define as e-learning.

Emerging issues

The difference between outputs and outcomes needs more work. By *outcomes* we refer to a process, such as confidence building, that leads to an outcome of increased confidence for the centre user or a personal goal to use ICT more frequently. If a centre becomes too focused on *outputs*, such as externally accredited exams, it may become what we call 'output shackled'.

In our study, output shackling was identified on 25 occasions (1.26%). The concept relates to the measurement of what goes on in a centre. How does one measure the success of centres? Who is measuring? If the answer is the DfES, there may be a focus on only looking at educational benefits. However, benefits accrue from using a centre in terms of community regeneration and cohesion, and improved social and work-related issues in deprived areas.

Conclusions

Although there is a current trend for talk to revolve around making ICT the third basic skill, this may only get our citizens halfway towards e-learning. Some evidence for this assertion has been uncovered in our analysis of the interview data. Although more work is needed, there is evidence to suggest that the three stages of the ICT literacy life cycle are:

- simple use of ICT, for example, on spreadsheets for simple accounts or word processing software to write a CV
- users may have then have gained enough confidence to engage with an online community, sending e-mails and browsing the web
- the centre user may then engage in e-learning, using whatever systems are available.

At the moment, UK online centres tend to focus on ICT literacy stages 1 and 2, with only isolated examples of stage 3. The higher-level problem solving literacies are currently not, in general, being addressed. This points to the need for more work to support e-learning and communicative interactivity, critical and creative thinking.

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