

# Beyond Formal Learning: Informal Community eLearning

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## Abstract

The goal of the study described in this paper was to gain an improved understanding of the social context of UK online centres and issues around the creation and exchange of knowledge within and between online community centres. Grounded theory and a pilot study were used to guide our research. The key findings of our research were (i) an elucidation of the goals that drive individuals to improve or share knowledge with others and (ii) the high level concept categories of life-cycles provided us with the basis for a model which characterises formation of, and participation in, informal learning communities. Indeed, the high level concept categories that emerged as strongly supported in our analysis point to the need for interdisciplinary theorising in this area. In this paper we will: (a) give a summary of what we mean by informal community eLearning, (b) illustrate the key issues with results from a study of UK online centres, and (c) make recommendations for future theorising and research directions.

*Keywords: Emerging Contexts for Learning: informal learning & community-based learning*

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## 1. Introduction

Community building and its importance in society more generally, beyond formal learning, is increasingly being recognised. This is highlighted in a recent report into the role of community building through regeneration in the Adult and Community Learning (ACL) 'sector' (Cook and Smith, 2002). In the UK the decision has been taken to have about 7000 "UK online" centres across all parts of the country. This initiative intends to facilitate the political goal for everyone in the UK to have eGovernment services at a 'citizen's access point' at their local UK online centre by 2005 (PAT 15, 2001). However, there is still much which needs to be researched to better understand how communities are developed and maintained and the ways in which different learning technologies can be used to support this (Clarke, 2002). Consequently, the authors were commissioned to conduct a study of UK online centres by the British Educational Communications and Technology Agency (Becta); this paper presents the results of this study (the unpublished report mentioned above, i.e. Cook and Smith, 2002). Our study described below aims to provide a detailed snapshot of what has been happening inside UK online centres in the first nine months of 2002. Specifically, the goal of our study was to gain an improved understanding of the social context of UK online centres and issues around the creation and exchange of knowledge within and between online community centres. Emerging services, like UK online centres, increasingly act as a valuable environment for promoting informal learning. However, little is known about how these new networked centres function and the way in which informal learning might occur at these centres.

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## 2. Background

Freire (1993) has proposed an approach to informal learning that is rooted in community-based education and notions of 'listening to the community'. Freire particularly focuses upon the importance of collaboration and knowledge sharing with the least powerful in society, so that they may gain more autonomy. Such an approach aims to bring about change in the interests of greater equality and social justice. However, as Cullen, Hadjivassiliou, et al. (2002, p. 22) point out, currently there appears to be a narrow evidence base in the area of informal learning. Recent evidence on informal community learning is provided by the Departments for Education and Skills (DFES; formerly the Department for Education and Employment – the DFEE). Survey-based work has been commissioned by the DfES (<http://www.dfes.gov.uk/research/>) that provides some useful broad brush information relating to the economic and training usefulness of UK online centres.” However, we would point out that a focus on outputs, like jobs, as being of key importance may miss some of the other key social outcomes of active UK online centres. By “outcomes” we refer to a process such as confidence building or the drawing of excluded members of society into the online community centre that leads to an outcome of increased confidence for the centre user or a personal goal to use ICT more frequently. Furthermore, there appears to be great variation in the literature on ‘informal’ learning regarding definitional and theoretical issues (McGivney, 1999; Colley, Hodkinson, et al., 2002); however, the context of such learning seems crucial. Due to the heated debates about definitional issues of informal, non-formal and non-traditional learning, the next section gives a context-based definition of informal community eLearning.

## 3. Context-based definition of informal community eLearning

McGivney, V. (1999) has suggested that informal learning is learning that takes place outside a dedicated learning environment and which arises from the activities and interests of individuals or groups, but which may not be recognised as learning. Indeed, there are many definitions of informal and non-formal learning (Colley, Hodkinson, et al., 2002), which due to space limitations we do not elaborate upon here.

On the basis of the literature review briefly mentioned above, and consultation with Becta, we have evolved a context-based definition of informal community eLearning, which is taken here to include an approach that is rooted in community-based education and notions of 'listening to the community' (Freire, 1993). Such learning particularly includes collaboration and knowledge sharing with the least powerful in society, so that they may gain more autonomy and access to eLearning. By eLearning we mean informal community learning that is mediated by ICT, e.g. by Internet tools such as discussion groups. Thus eLearning is broadly conceived as community supported by new media.

But who, then, are the learners associated with these UK online centres? We define the learner, in this context, as follows:

- any citizen with access to a UK online centre (using the Government/Becta definition that access means ‘within a 1 mile radius of a UK Online Centre’, see the notion of Universal Access described at Web link 1)
- typically a person not engaged in formal learning (i.e. not enrolled on a course in further education or another formal institution)
- often a person living in a Neighbourhood Renewal area, which will often be characterised by: high unemployment, a low skills base, low literacy levels and few qualifications per inhabitant (in 2001 the UK government launched a national action plan to raise of the quality of life, employment and health etc. for deprived towns and regions these are “Neighbourhood Renewal” areas)

More specifically, in our context, a centre beneficiary is the person who is doing the informal learning. A centre beneficiary is a community member who benefits from the centre activities; for example:

- a single mother coming to storytelling classes
- a community member making use of free internet access to email relatives
- a bar customer taking part in an internet pub quiz organised by the centre
- a member of staff, who may also be a mother attending the centre and learning more about computers without realising it

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- a community centre staff member taking a European Computer Driving Licence (ECDL) course (the ECDL is a basic information technology literacy qualification recognised in the UK and throughout the European Union)

As the above definition of informal community eLearning indicates, there is some overlap between formal and informal learning, a point to which we will return below. The focus of our definition is to specify context and identify who is benefiting from informal learning.

#### **4. Research Objectives and Method**

##### *4.1 Research Objectives*

The goal of our study was to gain an improved understanding of the social context of UK online centres and issues around the creation and exchange of knowledge within and between online community centres. Particularly important research questions for our study were:

1. What is the social context of use of networked community learning and services, especially for traditionally underserved segments of society?
2. What kinds of learning are occurring and how can they be supported?
3. What is the relationship between the physical and electronic aspects of informal learning communities?
4. How is collaboration achieved between different types of online centres?

The longer-term goal of our research takes the view that if models of successful practise in UK online centres can be built, and then cascaded by the community to new start-ups and more established centres, then we will have the building blocks for sustainable capacity for bridging the digital divide.

##### *4.2 Research Method*

Grounded theory and a pilot study (Smith and Cook, 2002) were used to guide our research. Strauss and Corbin (1990) suggest that grounded theory is especially useful for complex subjects or phenomena where little is yet known (as is the case in our study). This is because of the methodology's flexibility, which can cope with complex data and its continual cross-referencing, which allows for grounding of theory in the data thus uncovering previous unknown issues.

A pilot study was conducted December 2001 to February 2002. The pilot was used to identify pertinent question for the study (i.e. to facilitate theoretical sampling). For ethical reasons, at the early planning stage it was decided that permission would always be obtained in writing, from all study participants, to use the data gathered for reporting anonymously in our research. Data from semi-structured interviews with twelve workers and users at five centres have been transcribed and analysed (7 female and 5 male). The criteria for being interviewed in the main study was first, to obtain an English-geographical spread, and second, to select centres that were regarded, by the commissioners of this work (i.e. Becta), as 'successful'. The interviews took place in March-August 2002.

Following an initial examination of the corpus (transcribed interviews), initial low level theorising then took place in the form of category and concept formation. Grounded techniques were used to guide the research, where concepts (48 were identified) are classified and grouped together under a higher order, more abstract formations called categories (which were: 'Life Cycle', 'organisational links', 'people/roles', 'informal learning', plus a final catch all 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.ti. The two researchers (Cook and Smith) checked they were coding in a similar manner (by both blind coding the same 1000 lines and comparing results). The authors collaboratively evolved a detailed coding manual which specified coding procedures and gave definitions and examples of all concepts and categories (see Cook and Smith, 2002, Appendix 2 for a summary of the coding manual). A further 500 lines was blind coded by both researchers and the results compared and anomalies corrected. Full coding of the corpus then took place, which took over 100 person hours. Note that scores described in the results below refer to the occurrence of a concept in the data (not the number of people that did x, y or z). Score per concept are expressed as a percent of the total number of concepts that were coded (total = 1992). So, because the 'goal' concept was identified 167 times in the data, it is referred to as having an 8.38% occurrence rate.

The findings from this analysis informed the design of a questionnaire, which was used in sixteen telephone interviews with centre staff. This was provided in order to give explicit accounts of contexts, both at a high and low level, in which the study was completed. According to Henwood and Pidgeon (1992), this increases the transferability of the findings to other contexts. The main results of the analysis part of the study are described in the next section.

## 5. Results of analysis of face-to-face interviews

In this section we present the main results from our grounded study. This will be achieved by first presenting the most frequently occurring concepts. We then go on to describe the emergent, higher level categories that were identified.

The concept **external organisation** links was broken down into the concepts of (i) a link between the community organisation being studied and another community organisation, or, (ii) a link from the community organisation being studied and another non-community organisation. External organisation links scored highest, having a 13.15% occurrence rate. This is significantly higher (by 4.77%) than the **goal** concept. The concept of goals refers to the centre manager or activity designer or the goal of a centre user/beneficiary. The high occurrence of goals (having an 8.38% occurrence rate) made it the second most identified concept.

The **inhibitor** concept refers to the issue of limitations that are placed on a centre by external forces or problems that are raised by interviewees. Inhibitors had the third highest occurrence rate at 6.88%. For example, Site 4 did not allow the centre to run courses that lead to qualifications by local Further Education (FE) college. Note that “FE” colleges in the UK cater for timetabled post-16 education up to and including first year undergraduate courses. FE is predominantly vocationally oriented. Although one FE college did provide tutors to visit Site 4 for experiential IT classes, this FE college stipulated that for people wanting to gain an IT qualification they must come to the college.

The concept **funding** was defined as any mention in an interview of sources of funding for a centre and related activities, e.g. charities, local government, etc. Another finding was that a main concern was related to funding (having an 5.07% occurrence rate, hence putting it in fourth place).

Support for the high level category of a **Life Cycle** was found. Life Cycle is defined as evidence of progression over time stages of (a) centre beneficiary life cycle (having an 2.46% occurrence rate) (b) centre life cycle (having an 2.86% occurrence rate) (c) centre staff life cycle (having an 2.56% occurrence rate).

In addition, clear evidence of a category **ICT literacy life cycle** was identified. In the ICT literacy life cycle users first underwent ICT literacy (having an 2.56% occurrence rate), they may then have gone on to engage in an ‘online community’ (having an 3.46% occurrence rate) and perhaps only then would centre users make use of ‘eLearning’ (having an 2.01% occurrence rate). Currently there is a reliance on eLearning provided by the BBC’s Webwise and LearnDirect. Note: “WebWise” is the UK BBC’s – British Broadcasting Company’s – web-based introduction to the internet and world wide web for novice adult learners, also accompanied by a series of television programmes. They provide web-based and CD-ROM based learning materials targeted at adult learners, providing knowledge and skills in IT, business and finance, as well as adult literacy and numeracy education. “LearnDirect” is a UK government-sponsored eLearning and resource-based learning organisation.

## 6. General Discussion of analysis of face-to-face interviews

One of our original research questions was: what is the social context of use of networked community learning and services, especially for traditionally underserved segments of society? From a bottom up perspective, the range of goals that motivate users and staff for self improvement and the collective improvement of others in the community were found to be various and powerful. Consequently, we claim that the concept of goal, when taken with the Life Cycle category, provides a framework for

explaining part of our research question. These goals may be the core ingredient that makes a centre work and so understanding them becomes relevant in the context of building models of successful practise that can be cascaded by the community to new start-ups, thus building up sustainable capacity. For example, one goal of subject 2 a centre tutor, with respect to her initial involvement in the development of Site 3, was

“We wanted to, to have it used, and used by the full community and not just by that small section of the community.”

A goal of a centre user, subject 3, was

“... keeping up with the kids [*very noisy background*] I’d go along for the crèche facilities, put my youngest in the crèche and learn about computing.”

And finally, for illustration purposes, a goal of subject 8, a centre coordinator, was

“What we would like to do is get the younger children, ... [to be] mentored by the older children that come in; so if we can get, sort of, boys that are around 17, 18, 19 and upwards to mentor those that are like 10, 11, 12 you know. And that’s something that we’re looking at right now to identify the need for mentoring.”

The complex issues surrounding goals needs more work. In contrast, there was evidence that centre users and staff have serious concerns about a range of ‘inhibitors’. Since inhibitors had the third highest score we suggest that optimism in the form of the goals of centre staff and users only just outweighs the perception of barriers to success. Below we have an example of an inhibitor from the interview with subject 6

“... it was the estate the whole estate, this is the regeneration side that goes with the housing. If you haven’t got decent housing, don’t bother. People aren’t going to come out of a damp flat with mould on the wall to play with a computer, you know. They have to have the housing needs dealt with first, and the anti-crime and the rest of it. It all needs to go together.”

The higher level category ‘Life Cycle’ is defined as evidence of progression over time of centre beneficiaries, centre workers and the actual centre itself. The concepts associated with this category are goal, change, progression, confidence, centre beneficiary life cycle, centre life cycle, centre staff life cycle (these are shown in Figure 1).

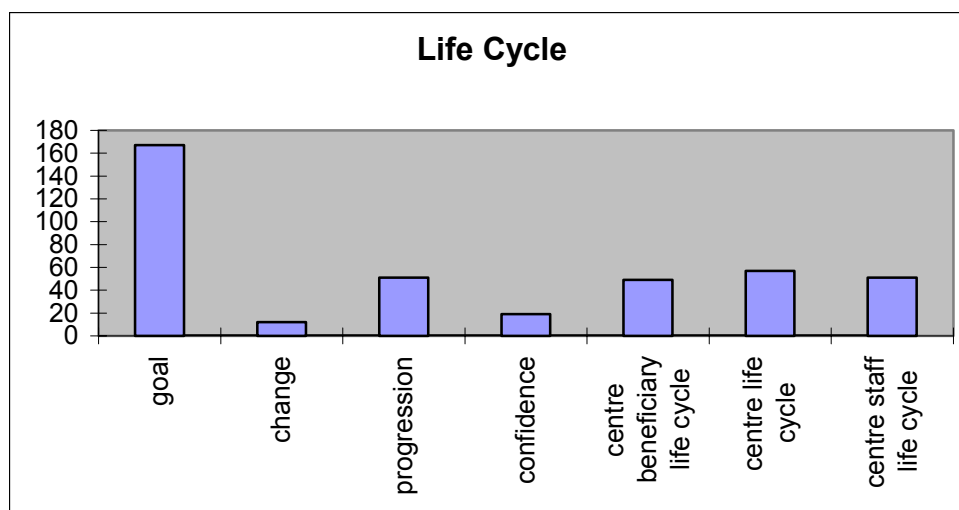


Figure 1. Scores for Life Cycle (scores are occurrence rates of a concept)

Progression routes from informal learning in community settings was the focus of McGivney’s (1999) study. As McGivney (1999, p. vi) points out “in the context of adult learning, ‘progression’ can mean several things – personal progression, social progression, economic progression and educational

progression. These frequently overlap.” In our study, progression was taken to mean evidence of an advancement of a person’s goals, knowledge, viewpoint, ambitions and/or confidence. This progression takes place over a period of time and may include a value judgement. A centre beneficiary’s initial goal might be simply to find information about a local council Controlled Parking Zone. A follow-up goal (and hence a value based progression) may be to set up a community group to discuss such matters. The desire to bring about such a progression (or change) may be the beneficiaries reason for visiting the centre. Progression outcomes should not be too narrowly defined and are at the moment implicitly placed in a Life Cycle in our analysis. We claim that the Life Cycle category is key to addressing our first three research questions (which were given above in Section 4.1). Below we elaborate on the Life Cycle category in order to support our claim.

The early stages of the Life Cycle occurred when local people were encouraged to drop into a centre, to then engage with staff, other users and resources in a way that was personally motivating for them. An initial ‘hook’ (defined as an activity to draw in users to a centre) at this stage could be either a crèche facility or “beautiful” new computers (the latter form of wording was used frequently by subject 6). Indeed, using computers as an enabling device for community education has also been reported by Freire (1998, p. 82), who claims to have “no doubt about the enormous potential for technology to motivate and challenge children and adolescence of the less-favoured social classes”. Figure 2 gives a good list of the types of centre learning activities that we encountered in our study.

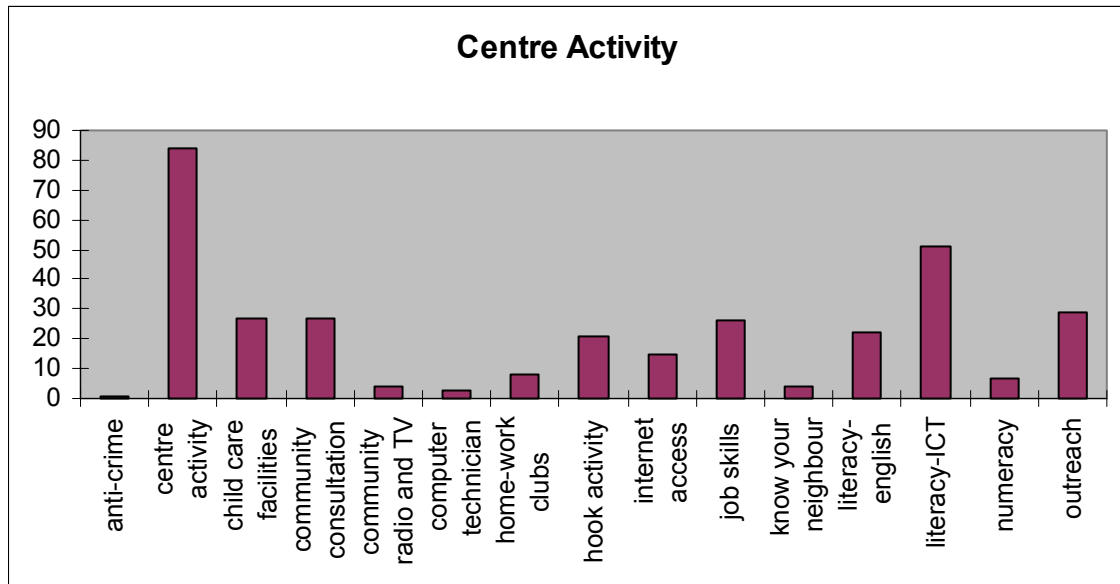


Figure 2. Scores for Centre Activities (scores are occurrence rates of a concept)

UK online centre users may then progress, and as they gain enough ‘confidence’ to take part in a more formal activity; a follow-up hook activity may facilitate this, e.g. writing a CV or sessions called ‘keeping up with the kids’. A study for the DFES (Web link2) confirmed that eighty-five per cent of respondents said that coming to their local UK online centre had increased their confidence to some degree. What we attempt to achieve below is an initial sketching out of *how* this increase in confidence is achieved, i.e. the kinds of learning that are occurring and details of how this informal learning is supported. Consequently, below we elaborate on aspects of the two categories of life cycle identified and the impact of resource sharing.

### 6.1 Life Cycle examples: centre beneficiary & centre staff sub- life cycles

Table 1 gives an example of a centre beneficiary life cycles. Specifically, this example shows how the centre helped a centre beneficiary to go through the initial use of learning to use ICT (the hook being a card game) and to then progress onwards to engage in an online community (the motivating hook being to email her son who lives far away).

**Table 1: Silver surfer**

**Subject 8:** ... for instance 'silver surfers', they're in the afternoon. And they say "ohh, I can't do it, it's not good". And after a couple of weeks they've kind of got the basics, they've learn how to use that mouse. Whereas at first, it's all over the place. And they're happy to, to give it a go. We had one lady that come in and says "I know you've going to think I'm stupid" and she came here for 10 weeks and all she was doing was playing cards on the computer. But it just gave her the mouse skills that she needed, she then went on, she was 83, she then went on and did a week's errm, induction at XXXXX College on computers. And then she came back here and she did beginners and the intermediate of computing. She said that her husband had died, her son lives far from home, the only way that she could contact him was telephone and email and she wanted to learn how to do it. And she did.

Some ICT qualifications can be gained through portfolios, i.e. continuous assessment, rather than an exam, which relates to the issue of the life cycle of centre staff. This is because staff may wish to gain qualifications to be able to assess centre users for portfolio-based qualifications. For example, at Sites 3 and 4 staff learn ECDL (European Computer Driving Licence) first to be in position to help other community members learn ECDL. Thus, there is some evidence to suggest that formal and informal learning may tend to get blended in community centres, with learners sometimes progressing from an informal mode to a more formal mode and back to informal mode of learning once a specific goal has been achieved. This observation has also been made by Colley, Hodkinson, et al. (2002, p. 5-6) and is an area that needs further investigation.

### 6.2 ICT literacy life cycle

During our analysis a new category emerged, which we are calling the 'ICT literacy life cycle'. Although there is a current trend for talk to revolve around making ICT the third basic skill (DFES Task Force Report, 2002), we suggest that this may only help to develop excluded members of society part way towards community eLearning. Some evidence for this assertion has been uncovered in our analysis of the interview data. We have found support for a three stage ICT literacy life cycle. Although more work is needed, there is suggestive evidence to support the view that the three stages are: (1) simple use of ICT on, for example, spreadsheets for simple accounts or word processors for CV writing, (2) users may have then gained enough confidence to cycle upwards to engage with an online community, by sending emails and browsing the web, and (3) the centre user may then engage in eLearning using whatever systems are available (e.g. systematic internet searching, engagement with discussion groups, taking online courses, etc.). We have found that UK online centres at the moment tend to focus on ICT literacy stages 1 and 2, there being only isolated examples of stage 3.

The higher level problem solving Literacies, like systematic internet searching literacy, are a combination of the 'lower level' ICT Literacies (i.e. stage 1 and 2). However, we suggest that higher level learner goals (stage 3) are currently not, in general, being fully addressed in UK online centres. The stage 1 concept score count was 51 (score in this contexts means the number of times analysers judged that the interview text was related to a specific concept), the stage 2 concept score count was 69, and the stage 3 concept score count was 40. Of the examples identified at stage 3 only preliminary eLearning appeared to be taking place.

Stage 1 ICT life cycle activities can be seen as attempting to help people improve their ICT skills. Such attempts relates to both informal learning and qualification driven learning – some people just want to play with internet or email and will learn informally, others want to get recognised qualification in IT. A related category to ICT life cycle is Life Cycle, and related concepts are confidence and progression. Furthermore, the ICT literacy stage reached can, for example, depend on whether centre user gets confident enough to take part in a more formal activity leading to an ICT qualification. This also relates to issue of how community centres are very different to formal learning environments (the related concept is 'formality of learning environment') and could go some way to helping us explore the research question: what is the relationship between the physical and electronic aspects of informal learning communities? The concept 'formality of environment' scored 33 (1.66%) and may really belong in the category Life Cycle or perhaps also in this category, i.e. ICT literacy life cycle. Underlying the concept of formality of environment is the desire to capture the nature of the approach adopted by a

centre. Is it very informal (e.g. pub quiz outreach or asking people who enter the centre what should characterise its 'offer')? Or is it more formal (a tutor comes in at a certain time to provide specific content or users following a specific course)? Many centre beneficiaries failed at school and would not or do not wish to go to a place like a college of FE (or at an early stage in Life Cycle do not have the confidence to be willing to go into such an environment). However, the success of centres like some of those in our study may be that they offer a non-threatening, very different atmosphere than a place of formal learning. Indeed, thirty years ago Scribner and Cole (1973) predicted, with perhaps some accuracy, the dangers and the benefits of trying to bring formal and informal learning together. For example, Scribner and Cole foresaw that learners who had become accustomed to informal learning might react badly in a more formal learning environment, e.g. their resistance to more formal aspects of learning might be evoked.

### *6.3 Resources sharing*

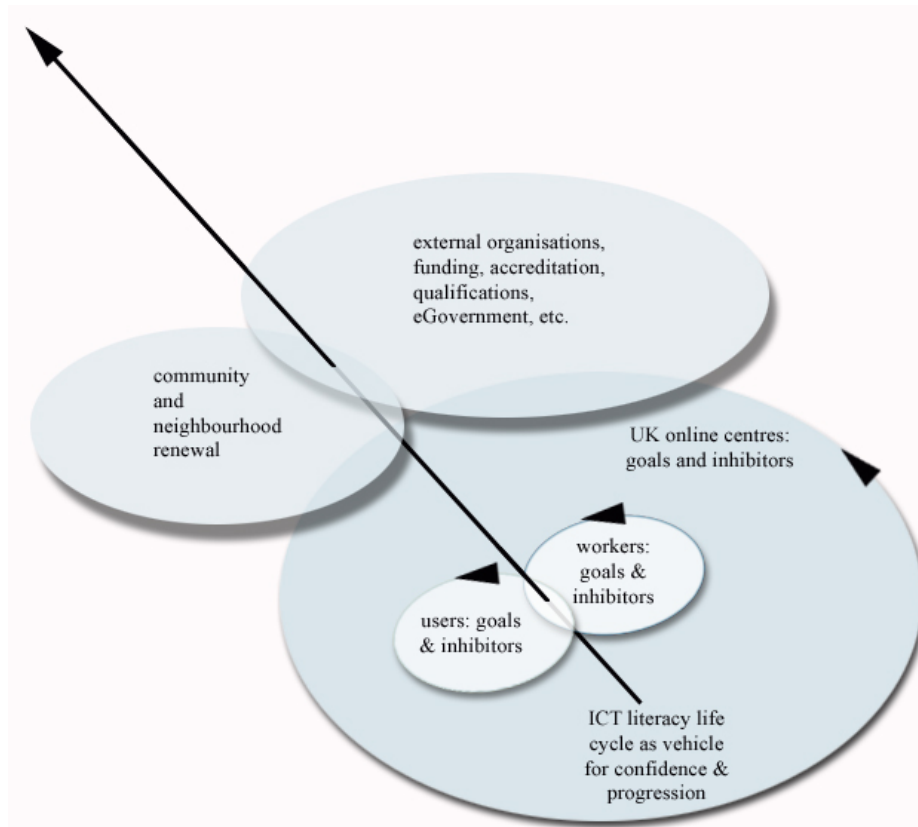
Our original research goal included the intention of examining 'issues around the creation and exchange of knowledge within and between online community centres'.

The first part of this goal, i.e. exchange of knowledge within online community centres, is related to the concept of 'content creation', which was identified on 44 occasions (score was 2.21%), which is of medium ranking. This does not include the exchange of knowledge, which in many cases was covered by various concepts and was one of the main reasons for the existence of a centre.

The second part of this goal, i.e. exchange of knowledge between online community centres is also our fourth research question: How is collaboration achieved between different types of online centres? Forming these links is essentially a 2<sup>nd</sup> tier organisation responsibility (these provide resources for UK online centres, i.e. Sites 2 and 6). Although the large number of external-organisational links identified in the study may be indicative of some kind of knowledge sharing, in our analysis we found little evidence of resource sharing between centres. The 'not invented here syndrome' may be responsible for this, i.e. because a resource was not developed locally it will not be used locally. More analysis of the data would be required to pull out the some form of understanding in relation to these issues.

## **7. Conclusion**

What has emerged from our study is a rich picture of the relationship between those who use UK online centres and their environment. Figure 3 provides a diagrammatical summary of the main findings of our study. In our study we found that the most commonly mentioned concept in interviews was links with external organisations. These links, represented at the top of Figure 3, were numerous and had a multitude of purposes, some of the most common being related to attempts to obtain funding for staff and equipment or accreditation for courses that the centre wished to run.



**Figure 3. Summary of informal community eLearning**

Centre users, workers and managers also have a very large number of goals that they wish to achieve. This preponderance of goals was the second most identified concept, and seems to point to UK online centres as one nexus of social and economic regeneration. However, if goals represent the optimism of a community, then reality in the form of inhibitors followed closely behind goals, running in third place as the most frequently identified concept. Figure 3 also illustrates the two higher level categories of life cycle that emerged from our study. The first category, called Life Cycle, is a cycle that relates to users, workers and the centre itself (these sub-life-cycles are indicated by arrow-heads on circles in Figure 3). The second type of life cycle is ICT literacy life cycle, which is shown at the base of the arrow in Figure 3 to indicate its importance as a hook for promoting informal learning. ICT was used in many centres for motivating the personal progression of users. In turn, the individual life cycles of users had the potential to evolve into that of a centre worker (hence the intersection between user and worker in Figure 3). An individual's personal learning trajectory is represented by a line that eventually exits the model. Although more work is needed, there is suggestive evidence to support the view that there are three stages in our ICT literacy life cycle, which we claim are instrumental in facilitating a personal learning trajectory. The ICT literacy life cycle consists of (1) simple use of ICT on, for example, spreadsheets for simple accounts or word processors for CV writing, (2) users may have then gained enough confidence to cycle upwards to engage with an online community, by sending emails and browsing the web, and (3) the centre user may then engage in eLearning using whatever systems are available. We found that centres at the moment are focussing on ICT literacy stages 1 and 2, there being only limited examples of 3. This perhaps points to the need for more work to be done to support eLearning plus the communicative interactivity, critical and creative thinking that this may entail. We found very little evidence of centres publishing their own resources beyond a simple web page that describes the centre activities and that may include the timings for these activities. Furthermore, only a limited amount of inter-centre resource sharing was found. This may have been because of the desire to personalise the community centre environment for what may have been perceived as 'unique' local community needs.

The high level categories that emerged as strongly supported in our analysis, like the two categories of life cycle discussed above, point to the need for interdisciplinary theorising in this area to supplement andragogical notions of 'listening to the community', 'emancipatory learning' and 'critical education'

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(Freire, 1993, 1998). The idea of listening to the community manifested itself with the concept of 'community consultation' – this concept popped up 27 times during the interviews (score was 1.36%), and seems to be key to a centre wanting to understand the needs of the community and give community members a voice to say what they want or need. Ideas related to the emancipatory learning appear to be alive in the centres. A strong statement by subject 6 about her centre confirmed that, from her perspective, the purpose of the centre was seen as being "to give something to people on this estate that will improve their socio-economic conditions of life ... [but] not just as individuals but as a community as a whole". The centres that we visited tended to operate in line with the more recent Freire perspective (Freire, 1998), where dialogue around the objects and artefacts developed with the support of ICT are seen as the vehicle for motivation, change and critical education. Consequently, we propose that future probing of informal community eLearning should include ideas revolving around interthinking (Mercer, 2000) and work on communities of inquiry and online dialogues (Lipman, 1991; Cook, 2002; Rheingold, 2002). Such a broadening of perspectives should help us understand better the joint, context sensitive, co-ordinated, social, economically and culturally motivated learning activities which people regularly accomplish using communicative interactions, whether this be in online or off-line communities. Indeed, our study provides in-depth insights into these issues. For example, our identification of a high level category called Life Cycles points to an evolutionary, and not revolutionary, cycle that seems crucial to the process of neighbourhood regeneration and bridging the digital divide. Perhaps most importantly, however, our understanding of these emerging contexts for learning, and our ability to model them, can be best improved if we incorporate cognitive theories of goal based activity and learning (e.g. Ng and Bereiter, 1995) and the relationship between goals, planning and communicative actions in purposeful dialogues (e.g. Power, 1979; Cook, 2002). Such models could, for example, then form the basis for the informal mobile learning scenarios described by Sharples (2003). Consequently, our future work will take the form of a large-scale study in this area to further build up our evidence base on informal community eLearning.

### Acknowledgements

This study was part of the Metadata for Community Content Project, a Becta project for the DFES. Thanks to Ann Adams, Middlesex University, for her helpful guidance on Grounded Theory. Thanks to Tom Boyle for commenting on a redraft of this paper.

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Web link1. <http://www.cabinet-office.gov.uk/innovation/2000/delivery/reachingthecitizen/content2.htm>, visited September 2002.

Web link2. *Evaluation of Pioneer and Pathfinder UK online centres: follow-up study*. Research Report 362. Report by Hall Aitken Associates for DFES. Published June 2002, ISBN 1 84185 759 9. Available at <http://www.dfes.gov.uk/research/programmeofresearch/>, downloaded September 2002. (As of April 2003 this report appears to have been removed from DFES website.)