Gaining control through technology and a voice

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Abstract

This paper reports work done under the ICT Skill for Life Programme and under the Penceil Project investigating the relationship of ICT non-use to social exclusion. The paper reviews the attitudes of adult non-users of computers towards ICTs and explores their aspirations for their use and/or their reasons for continuing not to use them. It then describes curriculum initiatives aimed to address people’s inability to envisage potential uses and their varied anxieties they expressed. The initiatives attempted to promote engagement through discourse and debate rather than impart a set of pre-determined skills through individualised worksheets. The paper concludes with recommendations for changes to prevailing approach to teaching basic ICT use to adults.

Introduction

There are 15 to 18 million adults who do not use information and communication technology (National Statistics, 2005; Central Office of Information, 2005). They have been categorised into many groups but a substantially proportion lack confidence in their ability to learn how to use ICT (Clarke and Englebright, 2003). The Central Office of Information (2005) commissioned MORI to survey non-users of ICT and they identified that between 44 and 58% of them were interested to some extent in learning to use ICT. The survey indicated that non-users tended to be older, poorer with few or no educational qualifications than the general population. The demographic changes occurring in the UK mean that the economy requires older workers to reskill and work longer than previously expected. E-skills UK, the ICT Sector Skills Council undertook a review of the ICT needs of employers (Gartner, 2004) that showed that 74% of existing employees needed to use ICT for their work and that 90% of new jobs required ICT skills. The report also concludes that the success of the e-government strategy depended on citizens across the UK being able to use online services. This paper will report on action research carried out in the Penceil Project¹ and through the development of the DfES ICT Skill for Life programme (NIACE, 2005).

There has been a major growth in the provision on basic ICT courses. In England the Learning and Skills Council provides public funding for approximately 750,000 adults to take part in these course each year. The Department for Education and Skills has

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identified the quality of this provision (Ofsted, 2005; Standards Unit, 2005) as an area for improvement largely due to poor retention rates. Only 54% of learners complete courses. A wide range of detailed reasons concerned with means of delivery have been proposed for this poor performance. However these discussions have largely ignored that these programmes have been developed in a top down manner and while the detailed contents of the courses have changed over time the model, structured around acquiring narrowly defined competences in the main office applications has remained unchanged for 20 years, while the nature of people’s engagement with ICTs has changed profoundly over that period.

In 2003, the government recognised the importance of ICT skills and knowledge for adults by making it a skill for life alongside literacy and numeracy (DfES, 2003). A set of standards covering introductory and intermediary levels of skill have been developed and these focus on ICT being taught in a purposeful way to produce independent users of the technology (QCA, 2004; DfES and QCA 2005). The ICT Skill for Life Action research was undertaken in 34 centres across England and involved 381 learners. It concentrated on the issues associated with implementing the new standards and developing the curriculum (NIACE, 2005). The research indicated the expectations of learners in both what they wanted to achieve and also how they wanted to learn.

The learners who participated in the Action Research had an average age of 44 with a spread from 15 to 85. Approximately two thirds were women with 18% of learners coming from ethnic minority groups. Thirty-seven percent were unemployed, twenty-five percent retired and eighteen percent disabled. Twelve percent had family circumstances that hindered their participation in education courses. They were drawn from existing learners who had voluntary enrolled on basic ICT programmes across England. The learners were asked to identify their preferred approach to learning about ICT. They wanted access to a tutor combined with practical activities and the opportunity to learn from their peers. To a lesser degree they valued learning materials and teaching packages. These preferences are different from the standard approaches to the teaching of basic ICT which is based on individuals working on the completion of worksheets in some type of workshop environment. This approach tends to favour more confident learners with previous success in education in that they have more developed learning skills and more self-confidence.

Action research tutors were asked to identify the mix of methods that they used to deliver the ICT skill for life provision. In order of priority the most frequently employed methods were:

1. Individual exercises
2. Worksheets
3. Group activities

The degree that the tutors’ normal approach to teaching ICT was influenced by the research is not possible to objectively assess but the use of group activities appears substantially enhanced. However, the principle methods of individual work linked to worksheets is very much the traditional approach and different from learners preferences which emphasised tutor and peer involvement.

Learners were asked to respond to two open questions:

1. What do you want to learn and do with IT?
2. What do you hope to get from this course?

Tables 1 and 2 respectively show their grouped answers.
<table>
<thead>
<tr>
<th>Answer</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>To learn to use a computer</td>
<td>27%</td>
</tr>
<tr>
<td>To update skills for employment and/or to enable working from home</td>
<td>15%</td>
</tr>
<tr>
<td>To gain a qualification</td>
<td>15%</td>
</tr>
<tr>
<td>To obtain information, use the internet, send e-mails, take digital</td>
<td>12%</td>
</tr>
<tr>
<td>photographs and learn to desktop publish</td>
<td></td>
</tr>
<tr>
<td>To gain confidence</td>
<td>8%</td>
</tr>
<tr>
<td>To improve my reading, writing and English</td>
<td>7%</td>
</tr>
<tr>
<td>Keep up to date and enrich my life</td>
<td>6%</td>
</tr>
<tr>
<td>No answer</td>
<td>5%</td>
</tr>
<tr>
<td>Help my children</td>
<td>3%</td>
</tr>
<tr>
<td>For pleasure</td>
<td>2%</td>
</tr>
</tbody>
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The range of answers shows motivation that is not simply limited to learning to use some computer applications. Learners have far higher and wider expectations than the relatively narrow delivery of basic ICT skills. Funding for providers concentrates on the achievement of an acceptable qualification while learners own objectives are far wider. This tension was reported by participating tutors as a significant constraint on their freedom to employ a wider range of methods.

**Research design**

In this section we briefly discuss our study design. Our aims included addressing the questions of: what inhibits people who experience social exclusion from becoming competent and confident users and how can this be addressed? As Chatman (1996 p 205) observes, “The process of understanding begins with research that looks at their [outsiders] social environment and that defines information from their perspective” (emphasis in original). Woolgar (2002b p 7) also stresses the need to see how people interact with technologies: “We need to focus much more on bottom-up experiences, on the nitty-gritty of actually making the damn modem work.” Thus, our research includes both an investigative element and action-research.

The field work for the study was conducted on and around a social housing estate in Lambeth, south London. The estate is typical of many in London being characterised by: high, but not extreme, levels of social deprivation; low income and qualification levels; and an ethnically and linguistically diverse population (Cushman, 2004). Interviewees were recruited from users of a number of local agencies including a local community centre; students attending local basic education and basic IT courses; parents at the local primary school; members of the estate’s older people’s club; and residents of an adjacent bail hostel.
Our interviews covered both total non-users of ICTs and people who were occasional and highly unconfident users. The interview extracts that follow are drawn from the 47 interviews conducted to date.

In setting the ethical policy for this research, which concerns people with little power, we identified a responsibility not to limit ourselves to studying but also striving to ameliorate the lives of people whom we investigate. For this reason action-research is a major component of our study. Based on the information collected during the interviews and drawing on the literatures from the fields of education, social and digital exclusion and information systems we designed and ran an introductory IT course called Living with Computers. The course was evaluated at the end via a short questionnaire. Every second week (6 times) a researcher from NIACE observed the lessons and made detailed notes. At the end of lessons 6, 8, 10 and 12 some learners agreed to speak about the course and its potential influence on their pattern of use. Feedback from the participants and our experience of running the course is being used to revise the curriculum for future courses and to inform practice and policy in this area.

In designing the action-research element of our study we sought not to set unrealistic goals. Reducing individual digital exclusion allows participants to achieve their life tasks more easily and maybe more cheaply, important for people on low incomes. Such interventions might at the limit of their ambitions allow excluded people to involve themselves, digitally and otherwise, in collective action aimed at changing the social conditions that define their life chances. Discovering better ways of teaching participants digital skills may also allow them to engage in the e-consumption of government services – to their benefit and to the benefit of service providers. This, however, is far from participating in an e-enabled democracy.

**Interview findings**

The interviews revealed that many non-users of ICTs wished to achieve tasks such as sending e-mails and searching for information and making purchases via the web, but that existing courses did not prioritise such tasks. The research also uncovered the wide range of fears and anxieties that non- and beginning users had about the technology and were poorly able to recognize risks of use effectively or to strategise about how to cope with these risks.

It was only among older Interviewees that we met people with no contact with these technologies and no interest in using them. However it is important to acknowledge Selwyn et al's (2003), warning against identifying older people as a homogenous group. Through our field work we contacted a range of older people, from early 60s to 90s and from would-be enthusiasts to total refusniks.

The most frequent anticipated use was e-mail

- **Int:** Why use e-mail rather than the phone? Is it cheaper?
  - **VR:** Yeah, e-mail is cheaper most of the time.
  - [Nigerian Female]

- **AH:** Oh, my brother says why you not get the email and the computer for? That is easy way for the computer now.
  - [Somali Female]

Searching for information, particularly about home countries was sometimes mentioned spontaneously and a prompt frequently elicited enthusiasm

- **Int:** Would you like to look at Ghanaian newspapers and things like that?
AA  Oh yes. Yes. I would like to. I have a friend, just across, and the children go there and they go on Ghanaian web, and football and all that in the news. And it would be great to see what is going on.

[ Ghanaian Female ]

Nevertheless, common to the total non-users of ICTs and the occasional users were their limited aspirations for the use of ICTs. Many interviewees knew about e-mail and were using it or wanted to use it for communicating with distant family and friends, none mentioned instant messaging as a way of achieving the same goal. VoIP, which had much media coverage during the later interviews, was not recognised as a possibility.

Int  What sort of things would you want to do on the Internet? If you could.
ZR I don’t know. Because it’s the first time, so I don’t know where - when can I seen the Internet, when can I choose to do Internet.” (West African female, working age)

The fears expressed were many and varied

SR I had a fear - all I did was play cards. I was terrified. Thought if I touched it I would mess it up.
Int One question is what’s to mess up?
SR I don’t know, you are frightened, people talk about losing this and losing that.  
[ Middle aged female ]

Int: What would you worry about?
DA About somebody getting to your details.
[ Ghanaian female ]

EH For some reason, I may be wrong, but when you read about fraud and so on, and if you don’t really understand it you could find yourself in a situation where you are trying to fly like an eagle and you are a sparrow, you know?  And you get stuck somewhere. I just think I am passed it. [ Jamaican male, 80s]

Int Do you hear about things like viruses and spam? And do they worry you?
SR Yes, yes.
Int And do you know what they are?
SR No. [ Middle aged female ]

Int Do you have any idea if you can trust things that you read on the Internet or don’t you know?
EW I don’t know. [ Jamaican female, early 40s]

The concerns of our interviewees about use of computers and the internet which, while imperfectly understanding the nature of the risks, were far from groundless fears. The privacy leak from AOL in August 20062 was an example of the potential problem both because of what was disclosed about identifiable individuals and what it revealed as lying in the records of Google and the other search engine companies about all their users (Brown, 2006).

The vast majority of our Interviewees expressed a belief that computer skills are becoming necessary in daily life.

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AA if you don’t know how to use a computer you are lost. Everything is changing so fast and you need to know how to use it. Very soon everything will be on the computer, it is almost on the computer anyway [Ghanaian female, early 40s]

AT I think because it’s like, it’s sort of taken over innit, the computer, and soon everything will be run by computer. So you can’t really get too far behind because you won’t even be able to live. [English male, late 30s]

ML2 I don’t know what a computer has got on it, so I have to learn first how to use it and if I learn how to use it I will learn what is in the computer, so I can make choice like that. …(Female, early 70s)

Most respondents were familiar with the idea of e-shopping (surprisingly frequently identified as eBay), whether they wished to engage in it or not but e-government services were almost totally unknown. Only one or two were aware it was possible to use the internet to contact local or central government. Even when the possibilities were described few people responded enthusiastically – most wished to continue to use the phone or visit offices in person. They appeared to mistrust the responsiveness of these services and believed it necessary to apply verbal or emotional pressure to gain their desired response. It was believed that an internet message would be ignored. The benefits of not hanging on the phone or waiting around in an office, although recognised, were not enough to compensate for the perceived loss of efficacy.

Action research phase

A new curriculum was developed to prioritise learning the skills identified in the interviews. However it was also clear that simple skills instruction would not help students envisage the range of activities they might wish to engage in. It was decided to ensure that the course was conducted so as to engage the students in discussions about potential uses and also about threats and risks. A pilot course was run, funded by Lambeth adult learning service. Results from the pilot demonstrated that students were able to engage critically with the content of the web. They were able participate fully in discussions about how to judge the authenticity of web content and learn to make sophisticated trust judgements despite limited educational qualifications and knowledge of the technologies.

This bears out lessons developed in the teaching of basic education that reading critically can be learned simultaneously with learning decoding skills and does not have to follow it (Mace, 1994). Just as writing and creating became central to learning to read, so the course demonstrated that learning to contribute to the web, through blogs and discussion fora, can form an early and valuable part of learning to use ICTs.

The interviews showed that people were often unaware of the range of tasks and activities they could achieve through ICT use. The course therefore placed discussion at its centre, in contrast to the conventional IT classroom which is focussed on the individual, their workstation and their worksheet. This discussion allowed student to exchange ideas about possible uses and to learn from each others' ideas and experiences.

Discussion

This research reveals a need for a change in emphasis from the simple mechanical learning of ICT skills to developing skills as part of enriching the opportunities for
individuals and will consider ICT in relation to information and media literacy suggesting that it is not sufficient to be able to use a computer but people need to be able to mould its use to their purposes and engage with and surmount the technological glitches and misinformation and possible fraud that they will continually experience. As Warschauer (2004) suggests, we should see literacy as a set of social practices rather than of narrow cognitive skills. This approach also allows us to reflect on how these technologies are not in themselves agents of social inclusion as government policy seems to suggest, but depending upon the conditions of use may either include, or further exclude, those already marginalised from society.

Social exclusion is a contested area with competing definitions. A set of commonly applied criteria are those developed by Burchardt et al. (1999) which cover the ability to engage in five analytically separable but practically inter-related dimensions of activity: consumption, savings, production, political and social. Individual's ability to operate in each of these areas is the result of many factors. These are both individual – such as education, skills and life events – neighbourhood – area of high unemployment, poor transport etc. – and structural – the functioning of the welfare state, racial discrimination etc.

Development of ICT skills and, more importantly, a willingness to engage with the technologies affects exclusion. Patterns of social exclusion are not neutral with respect to the technologies. As social, political and economic activity moves to the internet inability or unwillingness to use these new channels increases exclusion (Birdsell and Muzzio 1999) and many of our respondents coupled their fear of the technologies with a fear of being left behind by the technologies.

The link of ICT competence to production activity underpins the traditional basic ICT adult curriculum as deployed through CLAIT and ECDL, this curriculum based upon skills instruction in office applications (and pervasively MS Office applications) as well as being narrow does not embody an approach based on developing social practices. Many interviewees recognized the importance of the internet for consumption activities. They recognized that on-line shopping and on-line travel booking could be more convenient and much cheaper than traditional channels.

It is the dimensions of social and political activity that particularly demand a different approach to ICT learning as the technologies that support this engagement are the fastest changing. At the start of these research projects, web 2.0 (British Computer Society, 2006) was a barely heard term, two years later YouTube, blogs, podcasts, Flickr and MySpace had transformed what one can do over the Internet. They have also made computers one node in an assemblage of domestic technologies: digital cameras; video cameras, mp3 players etc. No student and no tutor can at the outset predict how individuals will want to exploit these possibilities. As much social interchange migrates to these spaces students need support to develop their voices, they need help both with gaining confidence and ability to articulate their views and with applying the technological infrastructure. This is a challenge that is different in kind for tutors from teaching how to format a table in Word.

Political activity is also being transformed. Many officials and elected representatives expect to be contacted electronically and to hear both individual issues and collective debate through e-mail and blogs. A new curriculum needs to cover the skills of developing an argument as well as the mechanics of sending a message, requiring e-literacy to be linked with traditional literacy skills. There is also a need to consider skills that are often regarded under the umbrella of media literacy (Livingstone, 2004). Information on the web is often devoid of conventional signifiers of authority and trust-
worthiness. This is significant over a wide range of data but can reach critical significance in areas such as health, one of the most frequent reasons for using the web (Dutton et al. 2005), and where information is often partial and selective. The Pencil course included a session on what to trust on the web and students with little formal education displayed an ability to make subtle and perceptive judgements in an area where university students often struggle.

Conclusions

Developing competence and confidence with ICTs is a matter of engagement and a re-imagining of individual potential for action rather than a skills acquisition process. While CLAIT to some extent and ECDL more extensively through their e-citizen programme have expanded the skills they see as relevant to beginning users they do not demand a change in pedagogy. The new entry level qualifications launched as part of ICT Skill for Life developments do encourage a change in pedagogy in that they encourage delivery in a purposeful way. In particular the programme is designed around classroom discussion and skills are taught through personal projects significant for students' activities outside the classroom. This will improve the likelihood that qualifications will be delivered relative to the needs, interests and objectives of the learners. However, making these changes general will require overcoming substantial inertia: there are entrenched habits of teaching through individualised worksheets and standardised assignments. Substantial staff development programmes will be required to embed these new practices as the new classrooms will be less predictable and more risky for the tutors but more stimulating and rewarding for the students. Our research indicates reasons to believe that such changes will tend to reduce the low retention rates that are general in this field.

Seeing use of computers as a catalogue of skills provides a poor base for enabling use of technologies that are changing at an accelerating rate.

While the possibilities for internet use have expanded so has the complexity of maintaining safe and secure use (Kaelin, 2005). Both these aspects increase the necessity to focus on understanding rather than merely skill acquisition and thus a more discursive pedagogy than has been usual in ICT classrooms. The gap between a discourse of opportunity promulgated by the Government and service providers and a discourse of anxiety and fear exhibited in our research interviews cannot be resolved by instruction. Debate, discussion argument and joint activity must feature in a successful ICT learning environment.

While better constructed curricula and classrooms can enable more people to engage with new ICTs and use them to achieve their own purposes and thus reduce their exclusion and feelings of isolation these will only assist those people who are willing to join classes or visit online centres. Those most excluded socially are also those least willing to engage in such ventures (Chanan, 2000). A belief that reducing digital exclusion will, of itself, lead to reduced social exclusion in naïve; often programmes that reduce other aspects of social exclusion will be a necessary pre-condition for people to be prepared to take part in activities that will reduce their digital exclusion. Challenging social exclusion requires attention to arenas where people can make their own voice heard as well those where they hear the voices of others.
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