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McQuaid, Ronald and Lindsay, Colin and Greig, Malcolm (2004) *Re-connecting the unemployed: information and communication technology and services for job seekers in rural areas.* Information, Communication and Society, 7 (3). pp. 364-388. ISSN 1369-118X

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'RECONNECTING' THE UNEMPLOYED

Information and communication technology and services for jobseekers in rural areas

This paper discusses the potential uses of the Internet and other forms of information and communication technology (ICT) as a tool for delivering information services for unemployed people, comparing the experiences and attitudes of jobseekers in peri-urban and remote rural labour markets. The analysis is based upon research carried out in two areas: the first combining a remote rural town with a much larger, more sparsely populated, rural 'travel-to-work area'; the second, a centrally located peri-urban labour market. Survey research undertaken in the study areas gathered responses from 490 unemployed jobseekers. Emerging issues were then followed up during twelve focus groups. The study found that the use of ICT for job seeking remained a marginal activity for most unemployed people, but was much more important in remote rural communities. In these areas, jobseekers were more likely to use the Internet as a search tool and were particularly dependent on telephone helplines provided by the public employment service (PES). However, the study also found that a 'digital divide' was evident within the unemployed client group. Those with low educational attainment, the long-term unemployed, young people and those perceiving their ICT skills to be 'poor' were less likely to use the Internet. Although respondents in rural areas were more likely to use ICT to look for work, they also pointed to the overriding importance of informal, social networks as a means of sharing job information in remote communities. We conclude that ICT may have a future role in the delivery of services for jobseekers, especially in rural areas. However, policies are required to ensure that information provided through ICT-based services is locally relevant, and disadvantaged groups have access to the facilities and training they require.

Keywords ICT; job search; unemployment; rural; digital divide; Internet

Policy makers have increasingly come to view information and communication

technologies (ICTs), and particularly the Internet, as an important tool in providing disadvantaged groups and areas with access to information, services and markets that would otherwise be inaccessible. Such an approach is particularly relevant in remote rural areas, which often suffer from weak service infrastructures 'on the ground', reflecting their geographical peripherality and scattered and sparsely populated communities. It has been suggested that in these, and similarly disadvantaged areas, unemployed people and other vulnerable groups may be assisted to access services and develop social contacts through ICT.

This paper discusses the potential impact of ICT as a tool for delivering information services for unemployed people, comparing the experiences and attitudes of jobseekers in peri-urban and remote rural areas. (ICT is defined as computing and telecommunications hardware, applications software and services in the relevant policy area, specifically telephone, Internet or other computer-mediated tools or services.) The analysis is based upon research carried out in two areas in northern and central Scotland. The first study area, 'Wick and Sutherland', combined a small, remote rural town (Wick) with a much larger, extremely sparsely populated, rural 'travel-to-work-area' (Sutherland). The second study area, 'West Lothian', is a peri-urban, industrialized labour market located in central Scotland, near major economic and population centres. The first phase of the research involved survey work undertaken with 490 unemployed jobseekers across the study areas. Emerging issues were then followed up during a series of twelve focus groups.

Following this introduction, part two discusses the context for the research – the potential benefits and barriers associated with ICT in providing information services for excluded groups, especially in remote and disadvantaged communities. Part three provides a brief description of the study areas and methodology for the research. Part four presents a comparative analysis of survey findings, and part five discusses the results of the focus group research. Finally, conclusions and implications for policy are considered.

ICT, social inclusion and the digital divide

ICT, social inclusion and the rural context

The potential benefits accruing from the use of remote, ICT-based services are particularly apparent in isolated, rural communities, which are often characterized by weak physical service infrastructures, and where other forms of personal interaction can be infrequent and time-consuming (Huggins & Izushi 2002; McQuaid 2002; McQuaid *et al.* 2003). As a result, policy makers are increasingly turning to Internet and other ICT-based approaches for delivering services in these areas. The Scottish Executive's definitive 'Rural Scotland' policy document reflects a strong belief in the capacity of ICT to contribute to a 'high

quality of life through access to services', although healthcare and education, rather than employment and social services, provide its main focal points (Scottish Executive 2000). The UK government's White Paper on rural England demonstrates a similar optimism regarding the capacity of ICT to reduce problems of distance, improve the responsiveness of services and deliver best value in isolated rural communities (DEFRA 2000).

To some extent, this shift in policy reflects a more general belief in the potential for new technologies to promote social inclusion, based on the idea that: 'ICT can have a far-reaching impact on the quality of life of marginalised segments of the population, by providing more responsive and transparent governance as well as improving the reach and delivery of health, education and other social services' (ILO 2001). Certainly, the current UK government (and devolved administration in Scotland) remain convinced of the merits of using ICT as a tool for social inclusion policy (DTI 2000; Scottish Executive 2001). The New Opportunities Fund invested over £250 million to develop a national 'electronic library network' providing web-based facilities and resources through existing public libraries (Liff & Steward 2001). Having accepted that local libraries and library staff are not always best placed to engage in the more challenging aspects of social inclusion work, the government has now also prioritized the establishment of dedicated 'ICT learning centres' in disadvantaged areas (Silcock 2001).

Targeted policies have also sought to apply ICT to the particular problems of disadvantaged communities. The UK government's 'WiredUp Communities' initiative (and the equivalent 'Digital Communities' in Scotland) has provided broadband Internet access, digital television, mobile and standard telephone links, and advice and support services for all citizens in selected pilot areas, including a number of remote rural communities in Scotland (DfES 2002; Scottish Executive 2002a). The objective is to assess how individual access to the Internet can transform opportunities for people living in these communities by developing new ways of accessing learning, work and public services. Evaluation evidence suggests that the take up of Internet services has varied widely between and within communities, with overall Internet service use in pilot areas ranging between 50 per cent and 90 per cent (Devins et al. 2003). There is some evidence to suggest that take-up in rural communities has generally been higher within the WiredUp Communities initiative.

Beyond the provision of basic learning and information services, it has also been suggested that the Internet's capacity to facilitate information sharing and individual participation can lead to the growth of more demand-responsive services 'from the bottom up', and so facilitate a more democratic and dynamic relationship between public service professionals and their clients (Burrows et al. 2000; Carter & Grieco 2000; Loader et al. 2002). Finally, it has been argued that the Internet and even telephone communications have the potential to supplement social capital by assisting individuals to extend their personal networks (Haddon 2000; Wellman et al. 2001).

However, despite a wave of 'techno-optimism' in the early 1990s, more recent analyses of ICT access and use suggest that claims that the Internet will inevitably result in the 'death of distance' as a barrier to employment and social inclusion are at best premature (Mansell 2002; Malecki 2003). The introduction of new technologies has generally tended to benefit the least disadvantaged, while large numbers of individuals continue to be excluded as a result of their educational or financial status (Servaes & Heinderyckx 2002). Indeed, it has been suggested that the digital divide affecting the unskilled and those on lower incomes can reinforce existing disadvantage, by further widening the relative differences in access to information and social networking opportunities (Phipps 2000; Devins *et al.* 2002). Meanwhile, ICT infrastructure development (including the introduction of broadband) lags behind in many rural and disadvantaged urban areas, when compared with more affluent communities and centres of industry and employment (US Department of Commerce 1999; Gabe & Abel 2002).

Furthermore, the claims made for the Internet as a social capital-building tool have also been questioned. Graham (2002) argues that the use of new technologies in service delivery restricts social interactions, particularly between different income groups. In their study of rural areas, Borgida *et al.* (2002) suggest that existing levels of social capital within communities define the manner in which the Internet is understood and used, with people in areas characterized by strong community ties more likely to view ICT as a tool for social improvement, but also more likely to raise concerns about the impact of online activities on face-to-face social interactions. There may be grounds for such concerns – Kraut *et al.* (1998) have shown that Internet use has the capacity to displace social activity, with potentially damaging psychological side effects. Similarly, Nie & Erbring (2000) have argued that the Internet 'could be the ultimate isolating technology', suggesting that one-quarter of Americans who use the Internet for at least five hours per week also report spending less time with friends and family as a result. The same research has noted Internet users' withdrawal from using other forms of media and communications (ranging from talking on the telephone to watching television), which can involve a greater degree of immediate social contact.

ICT and services for unemployed jobseekers

In the specific area of job search support for the unemployed, the national public employment service (PES), known as Jobcentre Plus, has promoted its 'Internet job bank' and 'Jobseeker Direct' national telephone helpline as important supplementary services throughout the country, and as its primary means of contact with jobseekers in remote rural areas. The Jobcentre Plus website has provided job search services since November 2000. The website's database has also become familiar to jobseekers using the national network of

Jobcentres, owing to the recent introduction of ICT-based systems into local PES offices in the form of computerized 'jobpoints' (touch-screen kiosks, which were installed in over 1,000 Jobcentres between April 2001 and February 2002).

The 'Jobseeker Direct' national telephone helpline was launched as a pilot programme in January 1999, and following the pilot's extension became a permanent component of the agency's provision in March 2000. The helpline, which charges at local call rates, offers job search advice to unemployed people and other members of the public. During 2001/2002, the service received 4.5 million calls, resulting in almost 4.4 million referrals and 115,000 job placements (DWP 2002). However, telephone-based services play an even more important role in one of our remote rural study areas. Given the absence of local PES offices, unemployed people in many areas of rural Sutherland are not required to attend Jobcentres to carry out job search activities or 'sign on' to show that they are actively seeking work. Instead, these jobseekers telephone their nearest 'local' Jobcentre in Wick (using a freephone number) in order to confirm their availability for work and receive job search advice. This service, although supplemented by the Jobseeker Direct helpline and the Jobcentre Plus website, amounts to the PES's only regular contact with jobseekers in these areas.

Relatively little research has been carried out into the impact of new technologies on services for the unemployed, although there is some evidence that the effective use of ICT by service providers can have a positive impact on the take-up of welfare benefits (Davies 2002). Early evaluations suggest that the Internet services offered by Jobcentre Plus tend to be viewed as user-friendly and helpful, but have not been associated with greater job search efficiency or success (GHK 2002a). Furthermore, PES staff appear to have mixed views regarding the effectiveness of Internet job search services delivered on site at Jobcentre offices, with time savings provided by ICT counteracted by some problems in operating new systems (GHK 2002b).

Although the introduction of the Jobseeker Direct telephone helpline has apparently proved popular with jobseekers, there is evidence that it has had relatively little impact on the regularity with which most unemployed people use Jobcentres, and that the vast majority of users live within thirty minutes travelling distance to their local Jobcentre office (GHK 2002c). For these people, the Jobseeker Direct service would appear to offer a useful addition to – but not a replacement for – local services. The manner in which ICT has been used to supplement rather than replace 'traditional' search methods has also been noted by US research on Internet-based job seeking (Kuhn & Skuterud 2000). Research carried out for the Department for Work and Pensions has also noted that unemployed people are far less likely to take advantage of the PES's ICT-based services than other members of the labour force, and that the unqualified, the long-term unemployed and those with poor work records tend to be particularly unlikely to use new technologies when job seeking (Coleman *et al.* 2002).

The research reported in this paper seeks to contribute to the continuing debate surrounding the delivery of services for disadvantaged groups through the Internet and other forms of ICT. By comparing the attitudes and experiences of unemployed jobseekers across a range of client groups and different labour markets, the analysis below offers an insight into the nature and extent of the digital divide affecting particularly disadvantaged groups and identifies potential benefits and barriers associated with the use of ICT in delivering services (in this case information and advice services for unemployed jobseekers).

Methodology and context for the research

Research methodology

This paper is based upon the findings of two distinct phases of research – first, a broad survey of unemployed people and then a series of in-depth focus groups – with both phases comparing the experiences and attitudes of unemployed jobseekers in the same Scottish study areas. The first phase involved the comparative analysis of two pre-existing datasets. These datasets were developed as a result of commissioned survey research undertaken by the authors between November 2000 and May 2001 in the two study areas: the West Lothian local authority area; and the contiguous Wick and Sutherland travel-to-work areas (TTWAs). In total, 300 responses were gathered in West Lothian (approximately 10 per cent of the registered unemployed), and 190 in Wick and Sutherland (22 per cent of all the claimant unemployed across the two TTWAs). Although the vast majority of responses in both study areas were gathered through semi-structured, face-to-face interviews (424), these were supplemented by limited postal and telephone survey exercises (66).

The second phase was designed to follow up the issues raised by the quantitative data analysis. Retaining the original study areas, this involved a series of focus groups with jobseekers who had experienced or were at risk of long-term unemployment. Twelve focus groups were convened (six in West Lothian, and three each in Wick and Sutherland) between July and November 2002. Focus groups, involving an average of six participants per group, were held mainly at community centres and other public facilities in the two study areas – participants were often users of community-based facilities offering services for jobseekers at these locations, which in some cases included Internet-based provision. One focus group, with jobseekers scattered across the remote Sutherland TTWA, was conducted via a telephone 'conference call'. Focus group discussions centred on participants' attitudes towards the Internet and other forms of ICT, their experiences of using ICT-based provision and other current services for the unemployed, and methods of looking for work.

The study areas in context

Although initially based on an analysis of two broad study areas, the research actually provides a framework for comparing three types of geographical area: Sutherland (population 13,000) is a large, remote and sparsely populated rural TTWA in the northern Scottish Highlands (covering an area of 5,865km^2); the neighbouring Wick TTWA is a small, remote rural town (population 13,000); and West Lothian (population 157,000) is a well-connected peri-urban area located near Edinburgh in the heart of Scotland's 'central belt' (see Figure 1). Caithness (the area in which Wick is located) and Sutherland are the most northerly counties of mainland Britain, and are therefore particularly remote from major centres of economic investment and industrial activity. The areas are also among the most sparsely populated in Europe (14.8 persons per km^2 in Caithness and only 2.2 persons per km^2 in Sutherland). Unlike West Lothian, both areas have been affected by persistently high rates of unemployment and long-term unemployment.[1]

As noted above, the services available to jobseekers in these two 'sub-areas' differ markedly. The Wick TTWA is dominated by the town of Wick, which has its own Jobcentre Plus office. The vast Sutherland TTWA hosts a number of very remote settlements, but has no physical Jobcentre facilities. As a result, unlike their counterparts in the Wick TTWA, many of Sutherland's jobseekers are excused from the fortnightly routine of appearing in person at Jobcentres to 'sign on' as actively seeking work. The absence of formal services provided by Jobcentres is likely to impact on the job search strategies deployed by unemployed people and may result in their readiness to adopt alternative methods, ranging from the use of ICT to a reliance on informal, social networks.

The second study area provides a strong contrast. The West Lothian local authority area is a peri-urban area situated between the country's two largest cities, Glasgow and Edinburgh. Its largest town, Livingston, is only 15 km from Edinburgh, Scotland's rapidly expanding capital, and 35 km from Glasgow, Scotland's largest city. The area is a major centre of manufacturing activity and has recently experienced job losses as a result of adverse sectoral conditions. Nevertheless, unemployment has remained at or below the national average in recent years.

Survey findings: job seeking and the role of ICT

Profile of the sample groups

The samples were designed to broadly reflect demographic differences within local claimant counts, although where possible women were deliberately over-represented in order to arrive at a usable female sample (in turn reflecting the
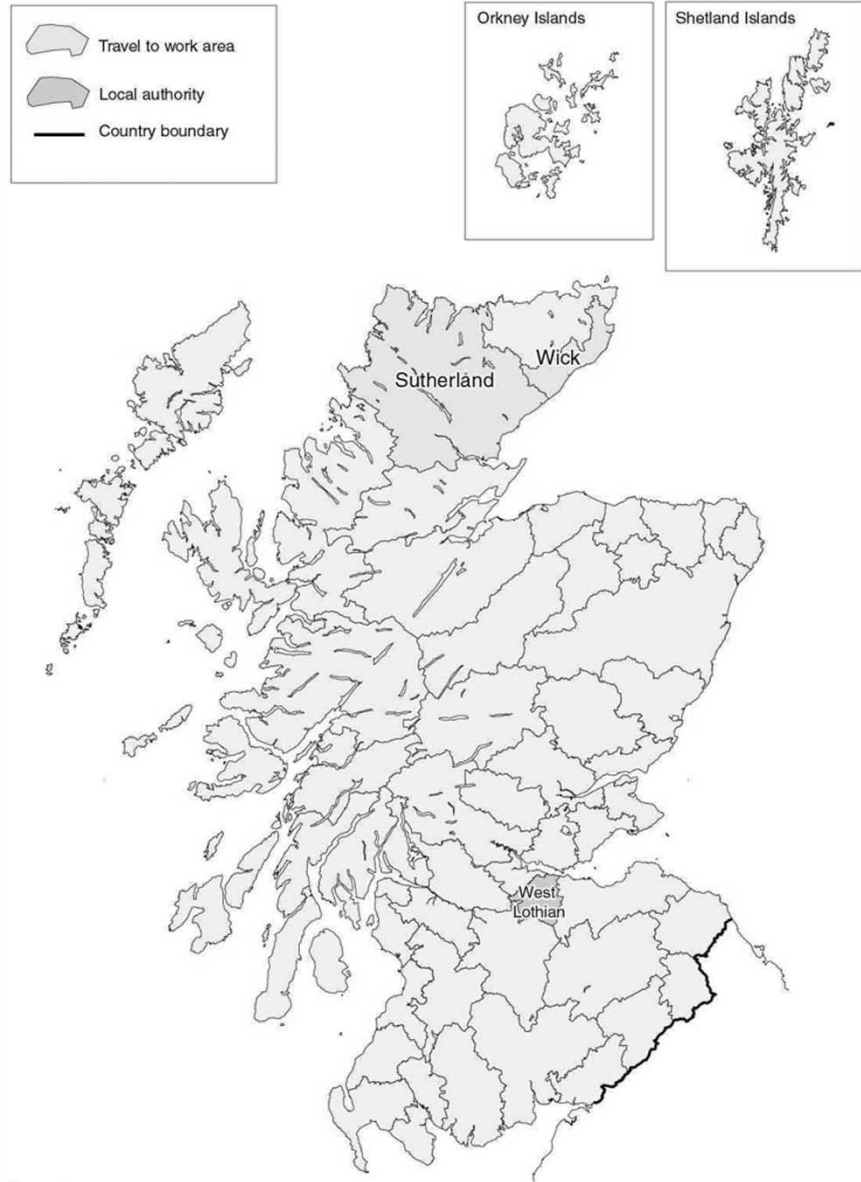
FIGURE 1

TABLE 1   Percentage of sample in study areas unemployed for 6/12 months

duration	Sutherland	Wick	West Lothian	combined study areas
6 months+	58	67	55	58
12 months+	37	45	34	37

generally low proportion of women within the registered unemployed population). Women therefore made up 29 per cent of the West Lothian sample and 20 per cent of Wick respondents (compared with 24 per cent and 17 per cent of the respective claimant counts in those areas). Unfortunately, despite efforts to better balance the sample, only 21 per cent of Sutherland respondents were female (compared with an unusually high 30 per cent of the local claimant count).

Long-term unemployed people were also specifically targeted. Accordingly, substantial minorities in both sample groups were long-term unemployed. As Table 1 illustrates, the majority of all sample groups had been unemployed for at least six months, and 34 per cent of respondents in the West Lothian sample, 37 per cent of those from Sutherland and 45 per cent of those from Wick were long-term unemployed (using the 'ILO definition' of unemployed and available for work for twelve months or more). This compares with claimant count long-term unemployment rates of 10 per cent, 30 per cent and 32 per cent in West Lothian, Sutherland and Wick respectively. These wide variations in claimant count rates reflect levels of long-term unemployment that were unusually high in Wick and Sutherland, and relatively low in West Lothian – the Scottish average ranged between 19 per cent and 20 per cent during the study period. Within the broad guidelines outlined above, respondents were randomly selected by researchers based at local Jobcentre facilities.

The educational attainment of the sample groups was rather similar, despite the presence of a higher proportion of long-term unemployed people in the Wick and Sutherland cohorts. The vast majority of respondents in all areas had fairly limited qualifications – 79 per cent of West Lothian jobseekers, 77 per cent of those from Wick and 71 per cent of those from Sutherland were not qualified to Scottish Higher Grade level (the equivalent of National Vocational Qualification level 3), the level of qualification generally required for admittance to higher education in Scotland. This compares with only around 45 per cent of the general Scottish labour force who are similarly unqualified. Clearly, those with few qualifications are more limited in the range and type of employment that they can pursue.

Job search methods used by respondents

The job search methods currently used by unemployed people in these very different labour markets should offer some indication as to the relative impor-

TABLE 2 Respondents using selected job search methods on a weekly basis (%)

job search method	Sutherland	Wick	West Lothian	combined study areas
newspaper advertisements	94	96	92	94
Jobcentre notice boards	31	59	77	66
advice from Jobcentre staff	47	43	69	60
personal contacts	73	74	42	54
direct approach	51	68	25	39
Internet	28	9	18	18

tance of ICT, informal social networking and more traditional, 'formal' services, and the potential for an expansion in the role of Internet or other ICT-based provision. As noted above, we might hypothesize that those residing in remote rural communities are more likely to rely on alternative methods of job seeking and less on the formal services that are provided by public agencies. Indeed, our initial findings highlight the different approaches adopted in the more remote Wick and Sutherland labour markets, where Jobcentre facilities are few or non-existent, and the more centrally located West Lothian. In remote rural areas such as Wick and Sutherland, it would appear that informal methods (ranging from direct approaches to employers to social networking though personal contacts) are a crucial part of day-to-day job-seeking activities. In West Lothian, on the other hand, the highly formalized services offered by the Jobcentre Plus agency were more important.

Table 2 illustrates this point. When asked about the job search methods that they used on a weekly basis, West Lothian respondents were far more likely to mention the information facilities and advice of staff in Jobcentres. Almost 70 per cent of West Lothian respondents had received advice from Jobcentre staff on a weekly basis, compared with only 43 per cent of those from Wick and 47 per cent of Sutherland respondents (who had mostly received advice from Jobcentre staff over the telephone). Clearly, the remoteness of some settlements in the northern Highlands makes it impossible for jobseekers to travel to the area's 'local' Jobcentre on a regular basis. However, the freephone telephone helplines offered by Jobcentre Plus appear to be unable to replicate the relationship established between jobseekers and staff within 'real' Jobcentre settings, at least in terms of numbers of contacts. Conversely, Wick and Sutherland sample members were much more likely to use personal contacts and direct approaches on a regular basis to look for work. Only 42 per cent of West Lothian jobseekers had used their contacts to look for work on a weekly basis, compared with 74 per cent of those in Wick and 73 per cent of Sutherland respondents – figures that were constant even when the sample was analysed by unemployment duration.

In all study areas, the Internet appears to be an important job search tool for a small – but still significant – group of jobseekers. Some 28 per cent of Sutherland respondents, 18 per cent of those in West Lothian and only 9 per cent of Wick respondents used web-based job search services on a weekly basis. Although Sutherland jobseekers were generally slightly more highly qualified than their Wick counterparts, a characteristic that may have some impact on Internet access, it would appear that location matters in determining ICT use in remote rural areas.

Jobseekers and ICT: access, skills and awareness

If facilities delivered via the Internet are to enable jobseekers to identify appropriate vacancies and provide opportunities to extend social networks, *access* to ICT is an issue of central importance. Comparing domestic access to ICT across our study areas, members of the Sutherland sample emerged as more likely to have a home or mobile telephone, at 85 per cent, compared with 83 per cent in West Lothian, and only 68 per cent in Wick. As Table 3 shows, Sutherland jobseekers were also much more likely to have a PC with private Internet connection than their Wick counterparts (27 per cent compared with 12 per cent). Internet access in West Lothian was comparable with that in Sutherland, at 26 per cent. Perhaps predictably, unemployed jobseekers were disadvantaged in terms of Internet access, with respondents generally far less likely to have access to the Internet than other members of the labour force. In 2001, when the survey fieldwork was completed, it was estimated that 38 per cent of households in the UK had access to the Internet (ONS 2003).

It is perhaps more worrying that a significant minority (15 per cent) of those from rural Sutherland reported that they did not have a home or mobile telephone. Among the long-term unemployed this rose to 21 per cent. Although research with unemployed jobseekers elsewhere has shown up to 25 per cent not having access to a telephone (Ashworth & Youngs 2001), the above findings are particularly important given the geographical and policy context. The telephone-based services provided by the PES to clients in very remote areas of Sutherland supposedly deliver high-quality advice and information to those unable to attend Jobcentre offices in person. Yet there remains a

TABLE 3 Home access to ICT, by study area (%)

form of access	Sutherland	Wick	West Lothian	combined study areas
Internet	27	12	26	23
telephone	85	68	83	80

substantial minority of Sutherland clients without ready access to a telephone, who are required to 'phone in' from others' residences or public telephone kiosks, in order to access the agency's services.

While area-based factors may account for some of the differences in ICT access and usage, it is likely that other, personal barriers will have limited the ability of some jobseekers to take up ICT-based services. Long-term unemployed people in *all* areas were rather less likely to have Internet or telephone access at home. It would appear that this in turn reflects a combination of financial and skills barriers faced by the more disadvantaged. Whereas only 15 per cent of those jobseekers reporting a total household income of less than £150 per week (then approximately €236) had access to the Internet at home, the figure for all other respondents was 43 per cent. Similarly, only 15 per cent of those in the lower income bracket used the Internet to look for work on a weekly basis, compared wtih 27 per cent of those with a weekly income above £150. These above findings are unsurprising given the wealth of existing evidence that income is a crucial determinant of Internet access and use. For example, it has been estimated that only 16 per cent of Scottish households with an annual income of below £20,000 had Internet access in 2001, compared with 57 per cent of those above that income threshold (Scottish Executive 2002b). A similar relationship between household income and Internet access has been noted at UK level (ONS 2003).

Within our sample, those with limited skills were similarly disadvantaged in terms of accessing the Internet. As Table 4 shows, those qualified to the general level of 'SCE Higher Grade or equivalent' were more than three times more likely to have home Internet access than those with no qualifications (37 per cent, compared with 12 per cent). More highly qualified jobseekers were also much more likely to use the Internet to look for work on a weekly basis (34 per cent, compared with 8 per cent of those not similarly qualified). Again, these findings concur with previous research within the wider labour force, suggesting that more highly qualified people are significantly more likely to have access to and use web-based services (Russell & Drew 2001).

TABLE 4 Respondents with home Internet access and using the Internet to look for work on a weekly basis, by educational attainment (%)

respondents' general educational attainment	with Internet access	using Internet weekly
none	12	8
SVQ1-2/SCE O Grade or equivalent	25	16
at least SVQ3/SCE H Grade or equivalent	37	34
all respondents	23	18

Another considerable concern for policy makers must lie in the admission of many jobseekers, across *all* income and skill groups, that they lack confidence in using even basic forms of ICT. When asked to rate their own attainment across a range of areas, in general the vast majority of respondents described their skills as 'good or adequate'. Yet it is notable that, while less than 10 per cent of all respondents considered their occupational skills, literacy, numeracy or communication skills to be 'poor', 58 per cent held similarly negative views about their ICT skills. Clearly, self-reporting of skill levels may not necessarily reflect an objective analysis of the individual's actual attainment. However, given that it is common for jobseekers to demonstrate a degree of over-confidence in evaluating their skills attainment in other areas – perhaps reflecting the rhetoric used by many on a day-to-day basis when attempting to 'sell' themselves to employers – the fact that jobseekers were so clear about their *lack of skills* with regard to ICT may reflect particularly severe problems in this area.

The above findings support the conclusions of a number of previous studies highlighting the breadth and depth of the 'digital divide' problem. Servaes & Heinderyckx (2002) suggest that low take-up and use of ICT among excluded groups can be explained in part by a lack of need or awareness, but more so by problems (whether financial or geographical) in accessing technology, and individual gaps in the skills required to effectively exploit ICT. Furthermore, the social and economic divisions described above are typical. Norris (2000) noted that more highly skilled workers are three to four times more likely to be online at home than the unemployed. The disadvantage experienced by older people, the unemployed and low skilled and those on low incomes within our sample has also been observed elsewhere in the USA and UK (Servon & Nelson 2001; Selwyn 2002). In the sphere of job seeking, there is some evidence that being online at home is crucial to facilitating Internet-based job seeking (Kuhn & Skuterud 2000). If ICT, and especially the Internet, is to provide a way forward in providing services for disadvantaged groups and communities, clearly problems of access and skills gaps must be addressed.

Of course, access to the Internet does not always open the way to participation in online activities. Only around half of those with home access in West Lothian used the Internet to look for work on a regular basis. Internet job seeking was slightly more popular with those with access in Wick and Sutherland, but across all the study areas only 51 per cent of those with Internet access at home used web-based services on a regular (i.e. weekly) basis, while 24 per cent had never used the Internet to look for work.

As we have noted above, age, attitudes towards ICT, perceived and real gaps in technical skills and, perhaps most importantly, educational attainment and income status may all impact on the ability and willingness of jobseekers to use new forms of technology as a means of looking for work. However, there is a clear need to 'unpack' these variables and the relationships between

them. For example, those with lower household incomes are both more likely to be long-term unemployed and less likely to have access to the Internet at home. It is likely, although thus far unclear, that the digital divide experienced by many of these individuals is in reality a symptom rather than a cause of their long-term unemployment (in itself linked to lower educational attainment).

In order to test the association between individual and labour market characteristics and ICT access and use, two binary logistic regressions were carried out, one using Internet access as a dependent variable, the other using Internet use. The model examined the association between two dependent variables (home Internet access; weekly use of the Internet for job seeking) and selected jobseeker and area characteristics that emerged as potentially relevant from the above analysis. Dummy variables for the 'West Lothian' and 'Sutherland' areas (as opposed to the broader 'Wick and Sutherland' area) were used. Before the regression model was developed, a bivariate correlation was performed and variables that exhibited statistically significant correlations were removed. Table 5 shows the results of the regression analysis. All the variables listed were entered into the regression model using the forward entry method.

As Table 5 illustrates, the strong association between jobseekers' skills and ICT access is confirmed. Both formal qualifications and jobseekers' perceived ICT skills appear to be significantly associated with Internet access (with those perceiving their skills to be 'good or adequate' more likely to have online

TABLE 5 Respondents with home Internet access and using the Internet to look for work on a weekly basis, by selected individual characteristics

respondents' characteristics	home Internet access		weekly Internet use	
	beta	significance	beta	significance
level of qualification	0.270	0.054*	0.438	0.002***
perception of ICT skills	1.340	0.000***	1.167	0.000***
income group	0.484	0.000***	0.148	0.126
resident in West Lothian[†]	1.257	0.006***	0.517	0.281
resident in Sutherland[†]	1.925	0.000***	1.389	0.011**
uinemployment duration	−0.607	0.074*	−0.731	0.049**
age 18–24 years	−1.193	0.004***	−0.897	0.039**
male	−0.943	0.012**	−0.149	0.689
have children under 18	−0.570	0.108	−0.281	0.455
constant	−4.170	0.000***	−3.919	0.000***

Beta co-efficients estimated from binary logistic regression; ***$p<0.01$ (1% level); **$p<0.05$ (5% level); *$p<0.1$ (10% level); [†]base area is Wick TTWA.

facilities at home). Home Internet access was also associated with income status, reflecting the manner in which those with higher household incomes (often reflecting the presence of a working partner) are better able to cope with the costs of hardware purchase and connection charges. Although there was a positive association between Internet access and residence in both West Lothian and Sutherland, the level of significance was stronger for the latter.

The statistically significant association between factors such as gender and income status and Internet access was not replicated when Internet job seeking was analysed. There was, however, a strong association between measures of respondents' skills (formal qualifications and perceptions of ICT skills) and their use of the Internet as a job search tool. While residence in West Lothian was not strongly associated with web-based job seeking, there was a significant positive relationship between Sutherland residence and the use of the Internet.

Internet access and use therefore appears to be associated with a combination of factors related to skills and qualifications, income and gender. Perhaps more importantly, these findings confirm that those in more remote areas (such as the isolated settlements of Sutherland) are more likely to invest in domestic ICT facilities and use the Internet to look for work. In these areas, more so than peri-urban labour markets, there may be an awareness that the weakness of formal service infrastructures necessitates the adoption of 'alternative' job search strategies and approaches to social networking, with web-based activities offering one potential source of information and communication. However, it should be noted that ICT-based job seeking remains the activity of a minority. For most unemployed people, across a range of skill groups and social classes, technology-based forms of job seeking and social interaction remain a somewhat obscure concept.

Focus group findings: attitudes towards job seeking and ICT

Profile of the focus groups

Twelve focus groups were conducted (six in West Lothian and three each in Wick and Sutherland). The focus groups involved a total of seventy-two participants across the study areas. In West Lothian, separate focus groups were held with long-term unemployed people aged twenty-five years and over, contacted through a New Deal training provider; young people (aged sixteen to twenty-four), contacted through New Deal Gateway and youth training intermediaries; jobseekers aged fifty and over, contacted through a community-level job search service provider; and 'women returners' (female jobseekers with young children), contacted through a local family centre providing both training and childcare support. These client groups were targeted so as to provide an insight into potential barriers to ICT-based job seeking (and other job search activities) faced by groups who can particularly struggle to gain

access to work on account of skills gaps and a lack of recent and relevant work experience, age-based barriers or family and caring responsibilities.

While focus groups held in Wick and Sutherland were designed to draw a more 'general' membership, reflecting the limited pool of potential particip-ants, three groups were composed entirely of long-term unemployed people aged twenty five and over. The remaining three groups were mixed in terms of the age, gender and unemployment duration, with participants randomly selected. Although not necessarily statistically representative of the full client population, these in-depth discussions provide many useful insights. In order to overcome problems of distance, one of the Sutherland focus groups (invol-ving five jobseekers) was held via a telephone 'conference call'.

Focus group participants and ICT: access, skills and awareness

Before discussing jobseekers' views of ICT-based job seeking in detail, it is perhaps worth examining the context upon which individuals based their comments – i.e. their experience of and access to ICT and the Internet. Of the seventy-two jobseekers who participated in focus groups, seventy com-pleted short questionnaires, which gathered details about their knowledge of ICT and the Internet, their perceived level of ICT skills and their use of new technologies in job seeking. Although not necessarily statistically representative of the full client population, these in-depth discussions provide many useful insights. As Table 6 illustrates, members of our Sutherland focus groups were

TABLE 6 Focus group participants' access to/use of ICT (number of responses)

	no. of focus group participants by area		
characteristics of participants	*Sutherland (n = 15)*	*Wick (n = 14)*	*West Lothian (n = 41)*
Internet access at home	12	3	12
telephone access at home	15	9	36
used Internet weekly	9	3	12
used Internet at some time	2	2	16
never used Internet	4	9	13
used Internet for job search weekly	6	0	6
used Internet for job search at some time	2	4	15
never used Internet for job search	7	10	20
considered ICT skills 'good'	6	4	4
considered ICT skills 'adequate'	4	4	25
considered ICT skills 'poor'	5	6	12

clearly more likely to have access to the Internet at home. While four-fifths of these jobseekers were online at home, the figure was less than one-third for West Lothian participants, and just over one-fifth for those in Wick.

High proportions amongst our focus group participants in both Sutherland and West Lothian had used the Internet at some time, although this was much less the case for Wick jobseekers. However, perhaps the clearest finding emerging from Table 6 is that, even amongst those with access to the Internet at home, this form of ICT was considered somewhat marginal to their job search activities (reinforcing the conclusion reached following our quantitative analysis of survey responses). Of the seventy participants across all three study areas who provided questionnaire responses, twenty-seven had access to the Internet at home and twenty-four used it on a regular (i.e. weekly) basis; yet only twelve used the Internet on a regular basis to look for work. Over half of those attending Sutherland and West Lothian focus groups had used the Internet at some time for job seeking, although in the latter study area this figure reflects the limited job search training provided as an element of New Deal options.

Attitudes towards new technology at Jobcentres and Internet services

Despite their lack of previous experience of ICT-based job seeking, many unemployed people demonstrated an encouraging degree of adaptability when faced with the introduction of new technologies in Jobcentres. The recent introduction of jobpoints (which use web-based technology to link Jobcentre clients with a national jobs database) met with a mostly positive response, with many Jobcentre users welcoming the enhanced sense of privacy and autonomy provided by the terminals. This was contrasted with the lack of privacy afforded by the old 'cards and boards' approach, where lists of jobs were 'pinned to the wall' in Jobcentres. As one West Lothian jobseeker noted:

> The jobpoints are actually better, because with the cards it was too crowded and people would get in your way. The old way, I used to get really claustrophobic and it never gave you any privacy.
>
> > (Laura, 18, unemployed six months, West Lothian).

Few focus group participants reported major problems in using the new technology, and many commended Jobcentre Plus staff for the support and advice provided during the transition period.

> They [jobpoint terminals] can make a big difference if you know how to work them. It took me a couple of hours to get an idea of how to use them, but I can do it now and they [Jobcentre staff] gave me help . . .
>
> > (Patrick, 37, unemployed five weeks, Wick)

Where there was criticism, it tended to be constructive, with some jobseekers arguing for changes to software to enable easier browsing across occupations and local areas. The current software design of jobpoints (and the Jobcentre Plus website) requires jobseekers to identify a geographical area, industrial sector and occupation in order to focus their search. Rather than requiring jobseekers to enter these data repeatedly, it was suggested that jobpoints should be able to save individual profiles, enabling jobseekers to carry out multiple searches more easily. Lower-skilled jobseekers seeking entry-level work across a range of potential sectors also argued that the highly specific and targeted approach to looking for work promoted by jobpoints risked unnecessarily over-complicating the search process.

> Since they've computerized the Jobcentre . . . you go in and you have to press a button for local jobs, press a button for the type of job you're looking for, press a button for the area. Me personally, I preferred the old card system, because I haven't got a clue what I'm looking for, and I used to walk in and look at things and think, 'I'll try that.' Now, you've got to have a specific idea. I mean, I'm a manual labourer; I don't have a specific idea.
>
> (Peter, 53, unemployed two years, Wick)

Similar criticisms were applied to the Jobcentre Plus website, albeit for different reasons. Focus group participants living in remote areas suggested that there was insufficient local labour demand to justify the use of highly detailed searchable databases. These jobseekers argued for the introduction of an accessible 'local list' of all available vacancies, to operate alongside the service's more sophisticated national database.

Even those in remote areas of Sutherland who used the Internet regularly to look for work were sceptical about its potential for improving their job prospects. For these jobseekers, the main benefits of the Internet were related to convenience or cost – for example, accessing online versions of local newspapers was considered cheaper than buying hard copies. Members of our Wick-based focus groups who used the Internet to look for work were similarly sceptical about its value, and jobseekers in this area (which has its own Jobcentre) were generally less likely to have used the Internet as a job search tool in the first place. There was a common perception that Internet job seeking could add little to the more easily accessible services provided by the local Jobcentre.

Indeed, the general consensus among jobseekers in areas served by local Jobcentre facilities was that there was little need for additional Internet services. Awareness and use was generally rather limited in West Lothian, while in the remote rural town of Wick, focus group participants viewed web-based job seeking as offering a useful alternative mainly for those seeking to leave the

area. As noted above, Sutherland-based focus group participants were more likely to use the Internet as a regular job search tool, reflecting the absence of formal services in the area's remote rural communities. There is some evidence that a more targeted website, designed to provide easily accessible 'local jobs lists' across a range of sectors and occupations, may attract more rural jobseekers. Nevertheless, jobseekers in remote rural areas, where vacancies are limited, continued to take the view that new technology could do little to address the more fundamental problems of lack of demand within the local economy.

Attitudes towards telephone-based job seeking

Awareness and use of the Jobcentre Plus agency's Jobseeker Direct telephone helpline was low in West Lothian. It would appear that, given their ready access to Jobcentre facilities, focus group participants in West Lothian felt that they had little need for this alternative information source. Levels of awareness were higher in the Wick TTWA, but again there was a general consensus that Jobseeker Direct was unlikely to offer added value beyond the services available at the town's Jobcentre. In the more remote Sutherland TTWA, however, jobseekers had considerable experience of using the Jobseeker Direct national helpline. As noted above, the lack of Jobcentre facilities in the area means that jobseekers are required to confirm their availability for work during telephone calls to staff at the nearest Jobcentre (at Wick) and are advised to use the Jobseeker Direct service as an alternative to making regular Jobcentre visits (as jobseekers in less remote areas would be expected to do).

   Although the concept of a telephone-based information service met with general approval, Sutherland jobseekers raised concerns about the 'remoteness' of Jobseeker Direct. There was a widely held perception that, whereas jobseekers were once encouraged to telephone their nearest Jobcentre at Wick regularly to enquire about new vacancies, Jobcentre staff were increasingly redirecting such inquiries to the national helpline. This had implications for the quality of services – whereas Wick-based Jobcentre staff were perceived as possessing useful local knowledge, national Jobseeker Direct operators were viewed as demonstrating little understanding of the peculiar problems of distance and remoteness faced by rural jobseekers.

> A while ago, you used to phone up the Jobcentre at Wick to do a job search and they would do it there. Now they put you through to Jobseeker Direct, and they have no idea about where you live. I told the operator that I was sixty miles from my nearest Jobcentre and she didn't believe me. They were offering me jobs in Fort William [a journey of over 220 km by road]. It's the same every week, they just don't know where you are.
> (Eric, 26, unemployed five months, Brora, Sutherland)

These findings highlight a fundamental dilemma concerning the increased use

of ICT-based services at the national level. ICT has the potential to reduce administrative and other costs, expand personal choice in accessing information (e.g. in terms of time, privacy and location), and provide information that is both broader in scope and more targeted in addressing the needs of specific client groups. However, the experiences of jobseekers in Sutherland illustrate how an over-reliance on ICT-based services has the potential to lead to the gradual erosion of direct contact between key public agencies and their clients, adding to the sense of isolation amongst vulnerable groups in remote areas. Many focus group participants had valued the opportunity to speak to advisers who, although not 'local', were based in the northern Highlands and were aware of the problems of distance and geography faced by rural jobseekers. The increasing reliance on the Jobseeker Direct helpline to deliver information services to these jobseekers raises the danger of severing the link between unemployed people and PES professionals whose local knowledge can be valuable, or at the very least reassuring.

Barriers to the expansion of ICT-based services for jobseekers

Finally, it should be noted that the geography of local labour markets can play a crucial role in determining the overall utility of formal services, delivered through ICT or other means. In our rural study areas, Wick and Sutherland, the importance of informal, social networks to recruitment and job search processes was a recurring theme in focus group discussions. West Lothian focus group members also acknowledged that informal contacts could be a useful source of information about jobs, but did not consider social networking to be a crucial element in job seeking. By contrast, jobseekers in Wick, and especially Sutherland, were convinced that informal social networks, rather than interventions by public agencies, largely governed the allocation of jobs in their local communities.

It was suggested that, as a result of the strength of informal social network relations in these communities and the tradition of recruitment by word of mouth, many job vacancies were not communicated to the Jobcentre or advertised by any other formal means. Yet although many long-term unemployed people who participated in focus groups acknowledged that they faced particular problems in accessing informal networks, there was a general acceptance that these traditions were part of rural life and could be effectively exploited given a combination of good luck and sound judgement.

> In smaller communities, if there's anything going people know about them. Some jobs are just sort of arranged beforehand – the person who is going to get the job has already been decided before the vacancy even occurs. These things don't get advertised.
>   (George, 54, unemployed two years, Lochinver, Sutherland)

Overall, it would appear that, if ICT is to play an important role in

delivering services for jobseekers in rural areas, the design and content of Internet provision must be such that the new technology can be used to foster social networking as well as merely providing formal vacancy information. The development of web-based services that provide official job search facilities *and* opportunities for informal interaction may be one way of using ICT to bridge the gap between formal services and social networking in rural areas. Jobseekers' frustration at the basic lack of opportunities in their local communities will be a more difficult issue to address, although these concerns again highlight the need for job creation to play an important role in any employability policy agenda for rural labour markets (Lindsay *et al*. 2003).

Conclusions

Policy makers remain convinced of the value of ICT, and especially the Internet, in providing accessible rural services. The above findings partially support such an approach. Jobseekers residing in remote rural areas were more likely to use Internet and telephone-based services, reflecting the need for 'alternative' search methods in labour markets not served by Jobcentre facilities. Most jobseekers had also adapted well to the introduction of ICT into Jobcentres, with the support of PES staff. However, there is evidence to suggest that, where ICT is introduced, services must retain a 'local dimension' if they are to be effective. Rural jobseekers noted how the web-based jobs database provided by Jobcentre Plus offered highly sophisticated search mechanisms – ideal for urban areas with large numbers of vacancies, but over-complicated and poorly suited to small, isolated labour markets where a simple listing of all local opportunities may be more appropriate. Our focus group research also highlighted how the PES's deployment of a national telephone helpline in rural areas (in place of a more localized telephone enquiry service) had left some jobseekers with a heightened sense of isolation and frustration, mainly owing to the lack of local knowledge demonstrated by national helpline advisers.

Furthermore, the findings of this study suggest that there remain important barriers to the expansion of the role of ICT-based services. First, and most importantly, there is a need for further measures to tackle the digital divide experienced by many unemployed jobseekers. Those already disadvantaged, in terms of having lower skills, educational attainment and income, are clearly less likely to have the access and skills required to benefit from using ICT (and particularly the Internet) as a job search tool. The shift towards ICT-based services risks leaving these individuals behind, unless they receive adequate training and support through accessible local services.

Second, where ICT (and especially the Internet) is used as a means of providing job search services in rural areas, there must be an acknowledgement of the need for locally based hardware resources and a commitment to the development of online services that reflect the dynamics of local labour markets. Community-

based technology centres, offering access to ICT and training and advice for users, alongside an emphasis on peer support and social interaction, may be able to combine the best elements of informal networking and formal job placement provision. Similarly, locally focused, web-based job search sites may offer one way of encouraging the development of more open methods of job seeking and recruitment in rural labour markets. An opening out of these processes, long dominated by word of mouth and informal contacts, is important if the sense of exclusion experienced by young people, the long-term unemployed and others with limited access to social networks is to be addressed and interventions by key public agencies seeking to assist jobseekers are to be effective.

ICT-based services have the capacity to enable recipients to develop new skills, access information on employment and training, extend their social networks and communicate their needs to service providers and policy makers more effectively. Given the particular importance of social networking in rural labour markets, and the Internet's potential value in extending network relations, as well as providing 'official' information, an expansion and further development of services delivered through ICT may well offer considerable benefits. However, if ICT is to be effectively deployed to connect the unemployed with job search services and 'reconnect' disadvantaged groups with the labour market, a renewed commitment is required to the development of measures aimed at bridging the digital divide, and further investment is required in community resources, both online and on the ground in rural areas.

Acknowledgements

Note

1   During the period when the responses for the first phase research were gathered in Wick and Sutherland (November–December 2000), claimant unemployment was estimated at 7.0 and 10.6 per cent respectively for the two TTWAs, compared to a Scottish national average of 5.0 per cent. In contrast, at the time of the first phase of West Lothian fieldwork (May 2001), local claimant unemployment was estimated at 3.8 per cent, below the then Scottish average of 4.2 per cent. At the outset of the second phase fieldwork (July–November 2002) West Lothian's claimant unemployment

stood at 4.2 per cent, compared to 5.2 and 5.8 per cent respectively in the Wick and Sutherland TTWAs, with the Scottish average standing at 4.1 per cent. Note that the unemployment rates given above are based on 'work-force' calculations used at the time, but now discontinued as a measure of local unemployment by the Office for National Statistics (ONS). However, residence-based unemployment statistics (which have replaced workforce statistics) were not available through the ONS for the Wick and Sutherland TTWAs at the time of writing.

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